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The GEOGRAPHICAL MAGAZINE

EVEREST 1953

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After Everest by Eric Shipton

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Robinson Crusoe's Two Islands

by SIR HARRY LUKE, K.C.M.G., D.LITT.

I should like to rise and go
Where the golden apples grow;
Where below another sky
Parrot islands anchored lie,
And, watched by cockatoos and goats,
Lonely Crusoes building boats . . .

YES, R.L.S., but below *which* other sky, in *which* parrot island, are we to join your cockatoos and goats as they watch the lonely Crusoes building their boats? In the grey Atlantic which you left behind you, or the sunny Pacific whither you went to live and die? The answer is: in both the oceans, for two islands claim to be Crusoe's, and there is substance in the claims of each. But—in both with a difference. For, while one of the islands lies, it is true, in the Pacific, it is the South Pacific of the temperate and sometimes bleak and chilly thirties; the other simmers in the tropical waters of the Atlantic eleven degrees north of the equator. The present writer is among those—if any others there be—who have visited both Pacific Juan Fernandez and West Indian Tobago, the former once, in 1952, the latter repeatedly thanks to the sustained hospitality of his Canadian friends the Hamilton Harrowers, who have made it their home. So he has been able to observe with his own eyes how little the candidates have in common apart from their claim to Crusoe.

It all began, in a sense, with him who far more than Edward Teach deserved to be called "the mildest manner'd man that ever scuttled ship"—the pirate who studied Nature and wrote up his journal instead of spending his leisure in ways more usual among pirates—who kept himself to himself on board and so was able to produce one of the first best-sellers of the sea. I refer, of course, to William Dampier, the scholar-buccaneer and author of *A New Voyage Round the World.* Had Dampier, pilot of the privateer *Duke*, not known the winds of the South Pacific as intimately as he did, the *Duke* most likely would not have made Juan Fernandez in that January of 1709. In such case Alexander Selkirk (or Selcraig) might never have been rescued from his island solitude, in which case, again, Daniel Defoe would have been without the inspiration for his *Strange Surprising Adventures of Robinson Crusoe.* And one of the most popular romances of all time would have remained unwritten.

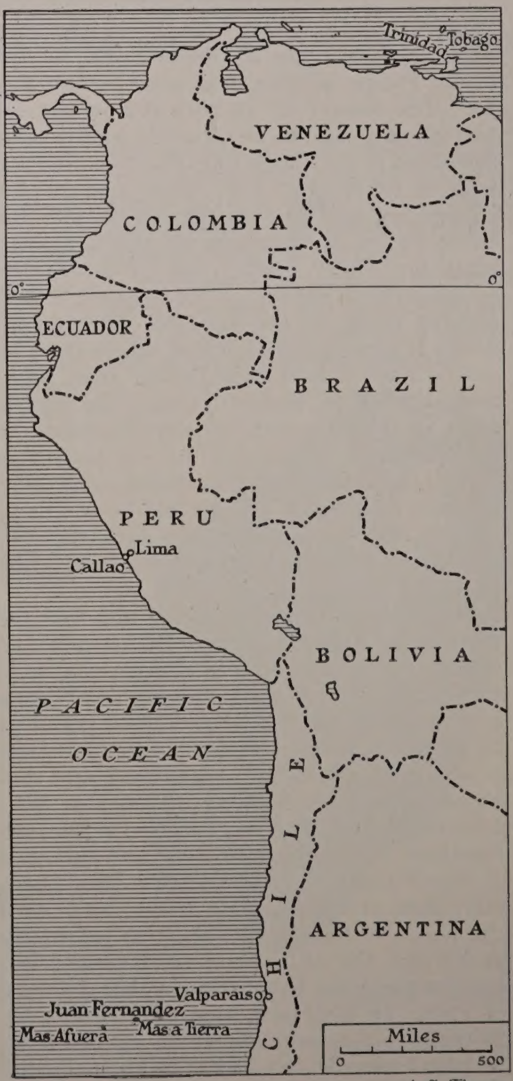
So Juan Fernandez must be allowed, I think, seniority over Tobago, for without Selkirk's four years and four months of residence upon it there would have been no Crusoe. Let me therefore begin with a short account of this group of three small islands, particularly of the one nearest the South American mainland 360 miles away, the boomerang-shaped Mas a Tierra ("More-to-landward") on which Selkirk passed his self-imposed exile. Just below the south-western point of Mas a Tierra is tiny Santa Clara, a bare five miles in circumference; ninety miles to the west lies Mas Afuera ("More-to-outward"). Mas a Tierra's area is about forty square miles, Mas Afuera's slightly less; but what is remarkable is their altitude in proportion to their size. The striking wedge-like El Yunque ("The Anvil") on Mas a Tierra is 3000 feet high, while Los Innocentes, summit of Mas Afuera, rises above 6500. Administratively the islands belong to the Province of Valparaiso, and of the trio only Mas a Tierra is permanently settled.

The group takes its name from the 16th-century Spanish navigator Juan Fernandez, who nearly fell foul of the Inquisition (and was known for the rest of his life as *el Brujo*, "the sorcerer") for his pains in discovering and adding it to his King's possessions. Seeking a way to shorten the voyage between Lima and Valparaiso, hitherto made by hugging the 1000-odd miles of coast in the face of constant headwinds, he decided to sail from Callao due west into the Pacific until he got beyond the range of what we call the Humboldt Current, and then veer south. In this wise he chanced upon the group of islands that now bears his name, but was charged by his rivals with being in league with the devil for accomplishing in one month a journey that normally took anything from four to six.

Juan Fernandez was able to satisfy the Inquisitors that his seamanship was not Satanic but commonsense, and his discovery contributed greatly to the development of colonial Chile. As an independent republic Chile retained the islands and first used them, like Tierra del Fuego, as a penal settlement, perhaps an appropriate fate for what in the previous century had been the base of English privateers harrying the Spaniards along the Andean coast. And in a roundabout way the connexion with England was resumed in the 1830s, when the Chilean Government appointed an Englishman as the settlement's second Governor. His name was Thomas Sutcliffe and he ultimately returned to his native land, publishing his memoirs nearly half a century after becoming the *gobernador gringo* of a small Chilean dependency.

It was Juan Fernandez who introduced the goats; the Jesuit Provincial, Father Rosales, who followed him, planted anti-scorbutics in the forms of celery, watercress and radishes; Nature provided the seals and the crayfish. The crayfish, noted Woodes Rogers, Captain of the *Duke*, who took Selkirk off the island and back to England, "are there as large as our Lobsters, and very good; these he [*sc.* Selkirk] sometimes boiled, and at other times broiled, as he did his Goats Flesh, of which he made very good Broth, for they are not so rank as ours." The crayfish—the large Fernandez crayfish *Palinurus frontalis*, often a ten-pounder and truly excellent (though one might tire of him as a daily diet)—is still there, the island's principal, indeed, now only industry; but the seals have been exterminated by indiscriminate killing, and no wonder. In his *Chilean Scrapbook* Stephen Clissold records that there once reached London a single cargo of a million skins of these luckless creatures. Every two to three weeks schooners take the crayfish to Chile, where they fetch good prices in the hotels and restaurants; some are even flown on to Buenos Aires.

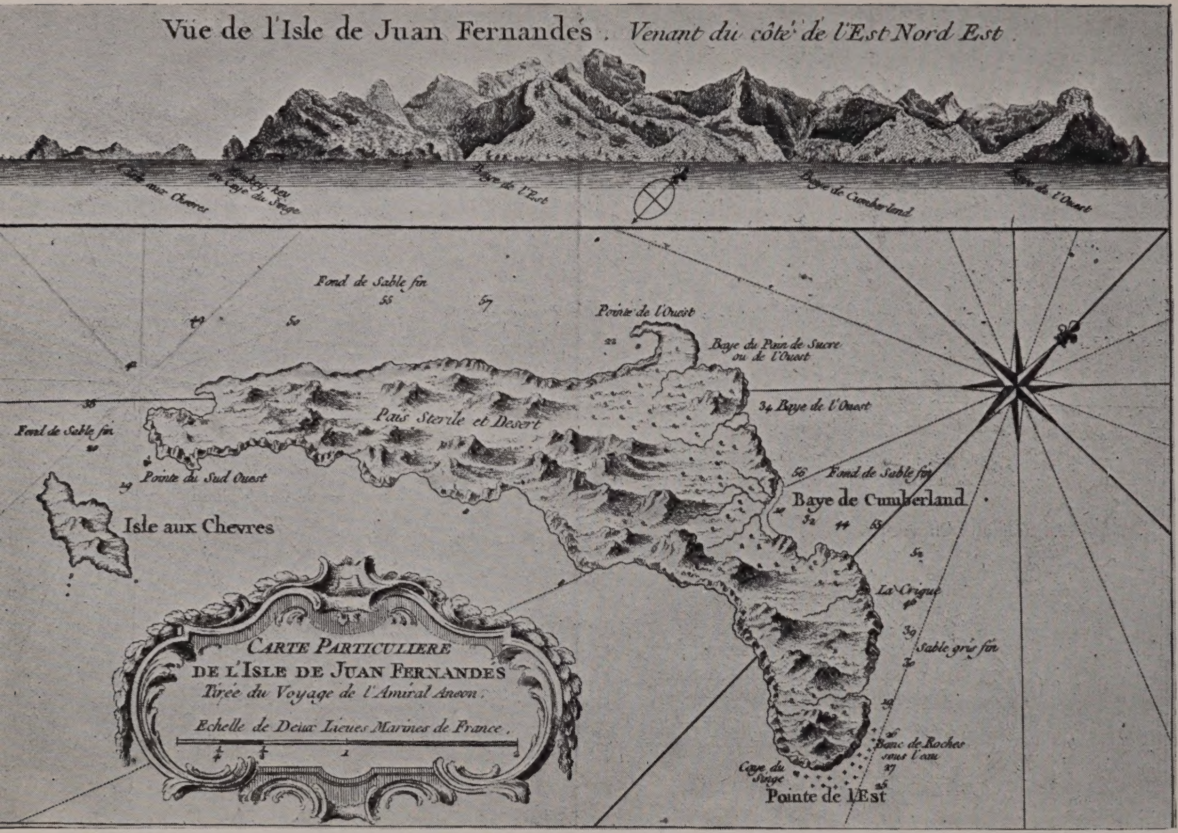
I travelled to Juan Fernandez in the Chilean cruiser *Presidente Pinto* on her way to Valparaiso from Easter Island (see *The Geographical Magazine* for October 1952); we reached it in May, that is to say, in winter. The jagged, serrated silhouette of Mas a Tierra's mountain ridges loomed rugged and sharp as we approached from the west and rounded San Carlos Point into Cumberland Bay. The waters of the Bay cover what is left of the *Dresden*, sole German survivor of the Battle of the Falkland Islands in 1914. Tracked to this obscure hideout by the *Glasgow* and the *Kent*, she blew herself up after a few shells had been fired into her by the *Glasgow*. Close inshore were three barge-like floating crayfish-traps, in which the animals are kept while awaiting shipment. And sloping upwards from the water's edge is the Group's one little settlement of San Juan Bautista. This consists of the sheds of the two crayfish-exporting companies; the elementary school (which I visited); the modest wooden houses of the four to five hundred inhabitants, mostly Chileans; a lighthouse; one bastion and two retaining walls of an 18th-century Spanish fort; a chapel and a cemetery. There is a monument to those killed in the *Dresden*, with one of her lifebelts at its foot. Scattered about the settlement are tall, stately Norfolk pines and heavily scented daturas; in places the ground was white with coarse arum lilies,



A. J. Thornton

All photographs from the author

(Above) *The "jagged, serrated silhouette" of Mas a Tierra, where Alexander Selkirk spent four years and four months alone, seen from the west.* (Below) *Cumberland Bay and the slopes above the island's only settlement, San Juan Bautista. In the left foreground is the Spanish fort*



rioting in rank profusion.

It rained heavily and almost continuously during our twelve hours ashore. This made the ascent to Selkirk's traditional "Lookout" difficult and laborious, for soil-erosion has destroyed the vegetation of the middle heights, and the steep, clayey, slimy goat-track had become a fast-flowing rivulet. The precious local sandalwood (*Santalum Fernandezianum*) has gone, through indiscriminate felling, the way of the unhappy seals; the other indigenous tree, the *chonta* palm (*Juania australis*) has all but suffered the same fate. It is not until the higher levels that bush and forest reappear.

The "Lookout" straddles a dip in the ridge below El Yunque, with a clear view over the sea to the north and south. Here the lonely exile might well have felt tempted to regard himself, in the words Cowper puts in his mouth, as "monarch of all I survey". The bronze tablet marking the spot was placed here by H.M.S. *Topaze*, the ship that brought home to Queen Victoria (who deposited it in the British Museum) the finest of Easter Island's six hundred gigantic stone statues. It bears the following inscription :

IN MEMORY OF
ALEXANDER SELKIRK
MARINER

A NATIVE OF LARGO IN THE
COUNTY OF FIFE, SCOTLAND

WHO LIVED ON THIS ISLAND IN
COMPLETE SOLITUDE, FOR FOUR
YEARS AND FOUR MONTHS

HE WAS LANDED FROM THE *CINQUE PORTS* GALLEY, 96 TONS, 16 GUNS, A.D.
1704, AND WAS TAKEN OFF IN THE
DUKE, PRIVATEER, 12TH FEB, 1709.

HE DIED LIEUTENANT OF H.M.S.
WEYMOUTH, A.D. 1723, AGED 47 YEARS.

THIS TABLET IS ERECTED
NEAR SELKIRK'S LOOKOUT, BY
COMMODORE POWELL AND THE
OFFICERS OF H.M.S. *TOPAZE*,
A.D. 1868.

The plaque was cast by a British firm in Valparaiso, John Child and Son, and even Juan Fernandez has not been spared the passing visitors who have had to deface its one monument with their names and initials.

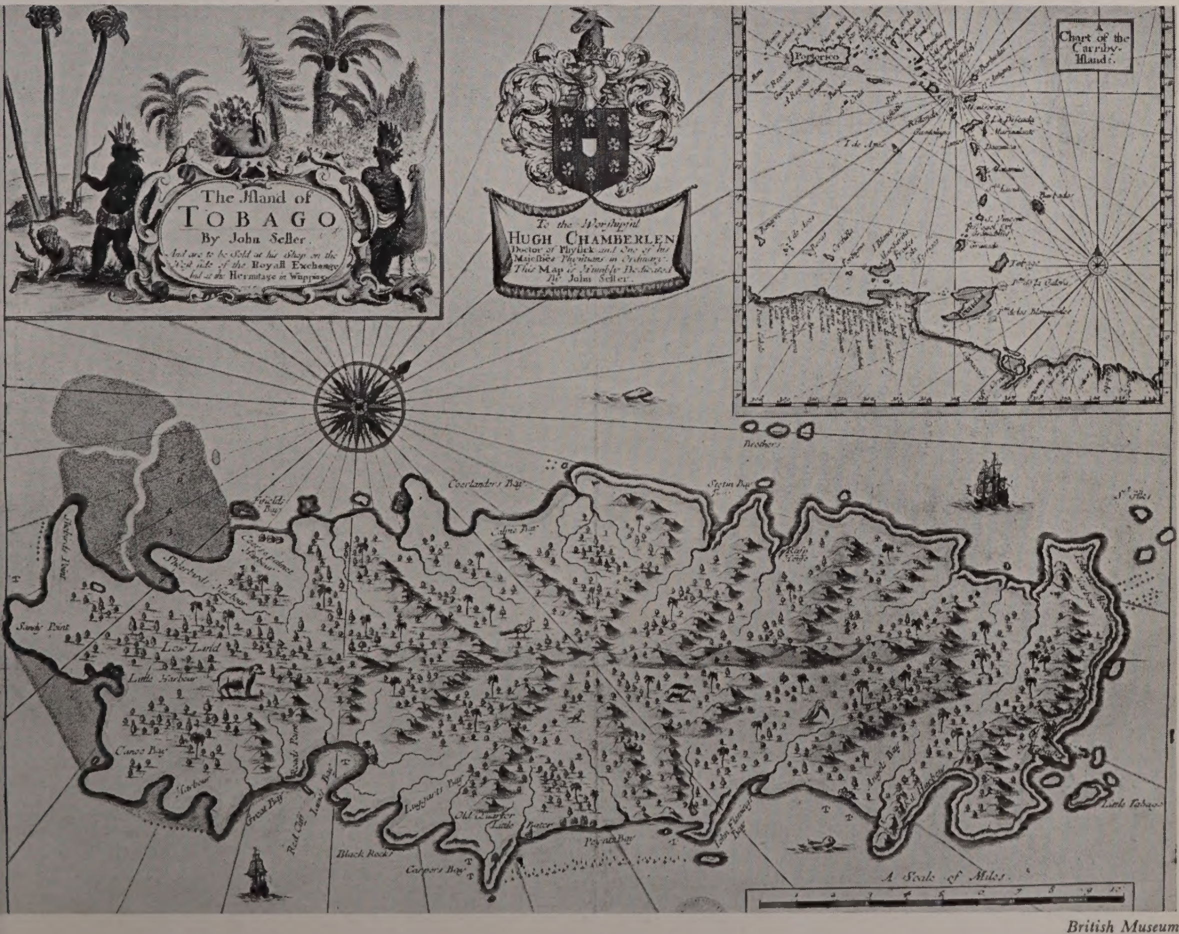
It has been claimed for Selkirk that on his return to Britain he was one of the first to sport an umbrella, presumably a derivative of the sealskin contraption with which he shielded himself from the summer suns of his island. He shared in the *Duke*'s considerable prize-money, so did not come home a pauper. Thus he was able to make bequests to sundry "loving female friends" with whom he had formed attachments in the course of his wanderings elsewhere than in Juan Fernandez.

Among those taking passage in the *Presidente Pinto* was a German lady doctor who had been studying problems of leprosy in Easter Island. As we left San Juan Bautista to repair on board, a man standing by one of the crayfish sheds came up and greeted her with a mixture of warmth and amazement. It transpired that he was a compatriot she had last seen and heard of in China. The odds against such an encounter must have been astronomical. It was more than the span from China to Peru; it was China to a minute outpost of Chile.

* * * * *

For the central figure of his story, for Selkirk with his goats and his crayfish, Defoe went to Juan Fernandez and the Pacific. But for its setting he chose the tropical waters of the Atlantic. Here a storm carries Crusoe to 11° N, "off the coast of Guiana . . . beyond the river Amazona toward that of the river Orinoque". Shipwrecked in a second storm, Crusoe is cast up on an island from which, when he comes to explore it, he can see in the distance the coastline of a larger one. This, Friday tells him later, is "the great island of Trinidad".

Now Trinidad is the only large island visible from Tobago; indeed, no-one disputes that Tobago (from the same root as tobacco) is Crusoe's home from the geographical and topographical points of view. And Tobago is highly conscious of the fact. In the name of


The Iſland of
TOBAGO
By John Seller.
And are to be Sold at his Shop on the West side of the Royall Exchange but at the Hermitage in Wapping
To the Worshipful
HUGH CHAMBERLEN
Doctor of Physick and One of his Majesties Physitians in Ordinary.
This Map is Humbly Dedicated
By John Seller.
Chart of the Carriby-Iſlands.
Porterico
Barbados
Tobago
Brothers
Courlanders Bay
Sandy Point
Low Land
Little Harbour
Canoe Bay
Great Bay
Black Rock
Little Tobago
A Scale of Miles

British Museum

the principal hotel outside the little capital of Scarborough, in Robinson Crusoe's Cave and in countless other places and ways his memory pervades the land.

What sort of a place, then, is Robinson Crusoe's "Other Island"? It is about three times the size of Mas a Tierra, with a population approaching 30,000, almost wholly of African descent and among the friendliest and best-mannered peasants in the West Indies. It is flat and coralline at its western end but volcanic and mountainous to the north-east. Here the prevailing crop is cacao; in the flat lands, sugar-cane. With its superb Man-of-War Bay and incomparable bathing beaches; with its steep ridges and deeply fissured valleys lush with tropical vegetation; its brilliant flowering trees; its equally brilliant tropical birds including the Amazon parrot, the jacamar, the motmot, humming-birds, keskidees (from their call, which sounds like *qu'est-ce qu'il dit?*), even, in the islet of Little Tobago, the Greater Bird of Paradise—it is one of the beauty-spots of the West Indies, to be classed, in my opinion, with that Windward Island quartet of 'lovelies', Dominica, St Vincent, St Lucia and Grenada. It is R.L.S.'s parrot island all right.

A conspicuous feature of West Indian history is the frequency with which its islands have changed hands among the colonizing nations of Europe. The record is held by Tobago with a score of twelve oscillations between Great Britain, the Dutch, the French and—a unique phenomenon in these waters—the Duke of Courland. Tobagonians have remembered the intermittent sway of their Baltic Duke between 1642 and 1681 in the name of their biggest river and in Courland Bay and Courland Plantation; in a rather touching way, and as recently as 1935, Courland has remembered Tobago. In that year, as Lieut-Commander C. E. Alford records in his Tobago Handbook, two officers of the tiny Latvian navy crossed the Atlantic in a small sailing craft to see the country where no other

A cove fit for Man Friday's footprint on the coast of Tobago, Robinson Crusoe's "Other Island"

Bringing in a catch at Scarborough, the capital of Tobago, where Crusoe's memory is kept green

Courlanders had landed for more than two hundred and fifty years. For the old Duchy of Courland had become a part of the new Republic of Latvia, which established a gallant independence after World War I, only to be swallowed up in World War II by Stalin's Russia along with Estonia and Lithuania.

From 1763 onwards (except for the years 1781–93 and 1802–3, when it reverted to the French) Tobago has remained British, a separate Colony grouped with the Windward Islands until 1889. But in the 19th century times grew hard and Tobago could no longer sustain the burden of a separate existence. So it was joined to Trinidad for an experimental period of ten years and in 1899 the arrangement was made permanent. The once prosperous Tobago now sank to becoming one of the twenty-odd Wards of the united Colony of Trinidad and Tobago.

How different was the story in the 18th century, when sugar was king! I once copied from one of the manuscript volumes of the Tobago Government's archives of that period—a volume including between the same covers records of both the British and French administrations—this bill for a public dinner given at Government House in 1799 to the Governor, one Masters, and to the Administrator of Grenada, Lord H. Seymour:

	£	s.	d.
Thomas Rochford his account for a public dinner to Govr. Masters & Administrator Lord H. Seymour in Jany., 1799	348	19	6
Strickland & Clarke their account for liquors for ditto . . .	239	5	0
John Campbell & Co. their ditto .	67	13	0

Those were the days. And that all this could be done during the French Wars shows how wealthy the Government of the little Colony, who paid for the banquet, must then have been. It appears that in the same year 1799 Government House was partially refurnished, and I extract from C. R. Ottley's *History of Tobago* certain items which throw light, incidentally, on the cost of the pre-plumbing apparatus of the 18th century:

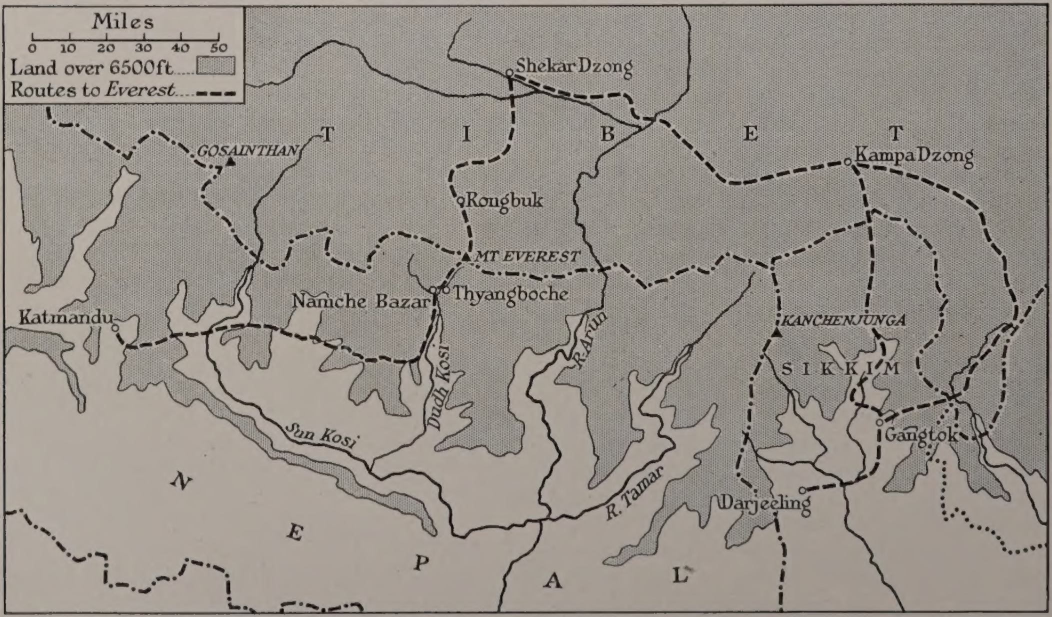
	£	s.	d.
1 Bedstead with 2 mattresses, bolster, pillows, &c.	98	3	6
2 Night Chairs 396/-; 1 Bidet 244/6 .	32	0	6
2 Mahogany toilet tables with drawers	66	0	0
2 Sofas	46	4	0
3 dozen chairs	61	17	0
1 Liquor Case and bottles . .	11	11	0

A more modest equipment had to satisfy Robinson Crusoe.

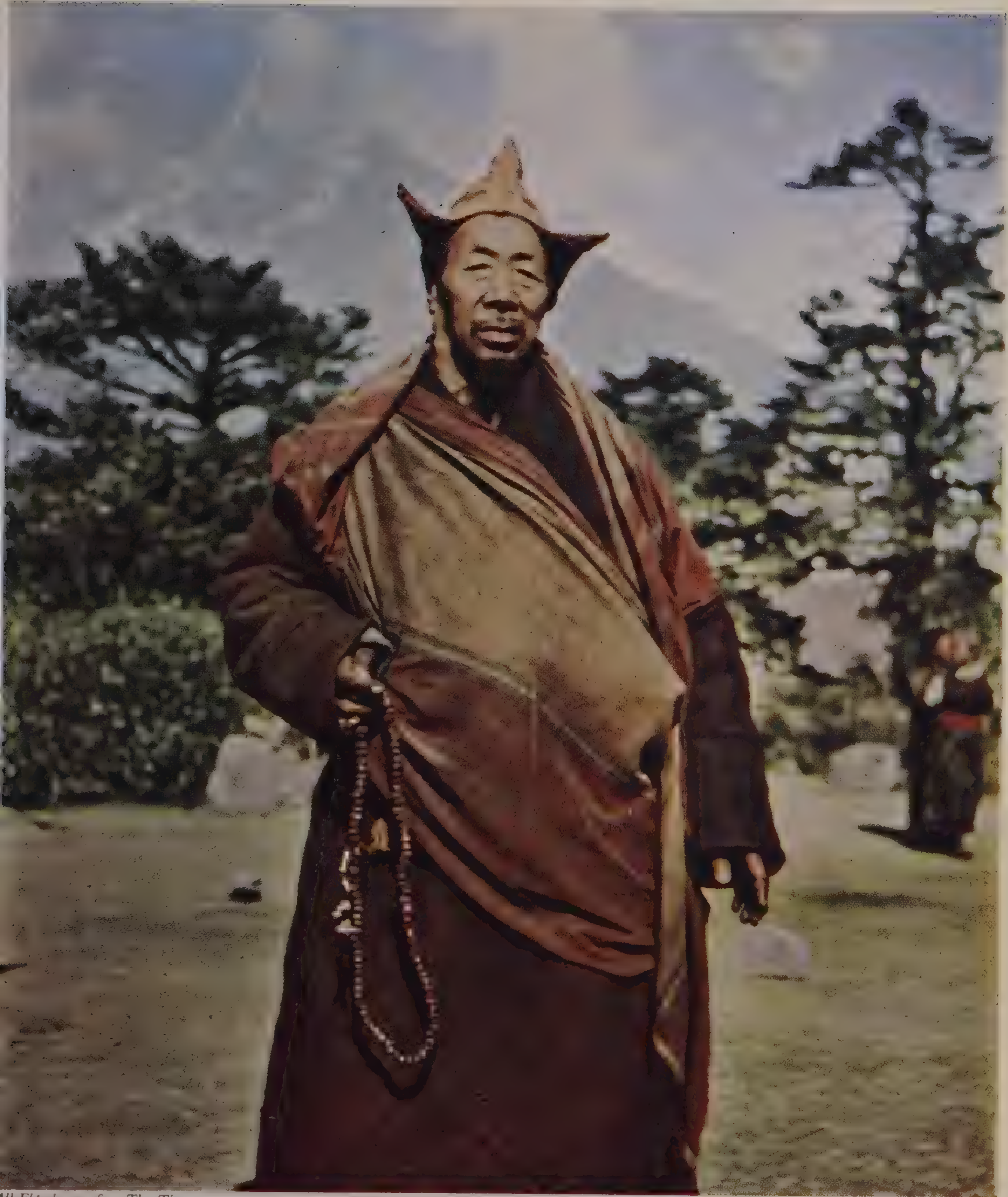
Everest, 1953

Chomolungma, the "goddess mother of the winds", lies between two worlds—Tibetan and Indian, Buddhist and Hindu; and the great mountain has long been revered by both from afar. In 1852 it acquired a new attribute in human eyes, for its supremacy in height was computed by the surveyors of the Government of India, who named it after their former chief. But it could only be approached from Tibet or the independent kingdom of Nepal, neither of which admitted foreign travellers; so not until 1921, when, in response to an initiative from the Royal Geographical Society and the Alpine Club, a friendly Dalai Lama gave his permission, could the first approach to the mountain be made. In the years before the second World War six more British expeditions made the attempt. All of them approached the mountain from the north, by a circuitous route from Darjeeling through Tibet; and all failed to reach the summit, although they collected much valuable information about the mountain's peculiar difficulties. The last two of these expeditions, in 1936 and 1938, were prevented by appalling weather from even trying to climb to the top; for in 1936 the monsoon came exceptionally early, while in 1938 there was no lull at all in the bad weather. During the war no climbing was possible.

Then came a change. While the political situation in Tibet grew more and more troubled, the Nepalese Government decided to admit climbing expeditions; and in 1951 a small reconnaissance party led by Eric Shipton, approaching Everest from the south, investigated the possibilities of a route from that side to the summit. It was known that to the south-west of the mountain lay a vast horseshoe-shaped hollow enclosed by Everest's satellites, Lhotse and Nuptse. Though no man had ever penetrated into this, the British mountaineers had given it a Welsh name: the Western Cwm. Shipton found a way up the ice-fall leading into it and reported favourably on further prospects. In 1952 he led an expedition to the neighbouring mountain Cho Oyu, to train men and test equipment, especially oxygen, for an assault on Everest. The same year two Swiss expeditions, following his lead, crossed the Cwm and climbed to the ridge which joins Lhotse to Everest, but just failed to reach the summit. The way lay open for the full-scale British expedition led by Colonel John Hunt in 1953



A. J. Thornton



ll Ektachromes from The Times.
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C. G. Wylie

On both sides of the frontier between Tibet and Nepal the population is Buddhist. Rongbuk monastery, some fifteen miles north of Everest, has its counterpart in Thyangboche, fifteen miles south; and the respective Abbots are in the habit of exchanging visits. The route followed by the post-war expeditions, up the valley of the Dudh Kosi, leads past Thyangboche; and the hospitality received by them from the lamas, one of whom is seen above, has rivalled that which the lamas of Rongbuk showed to their predecessors

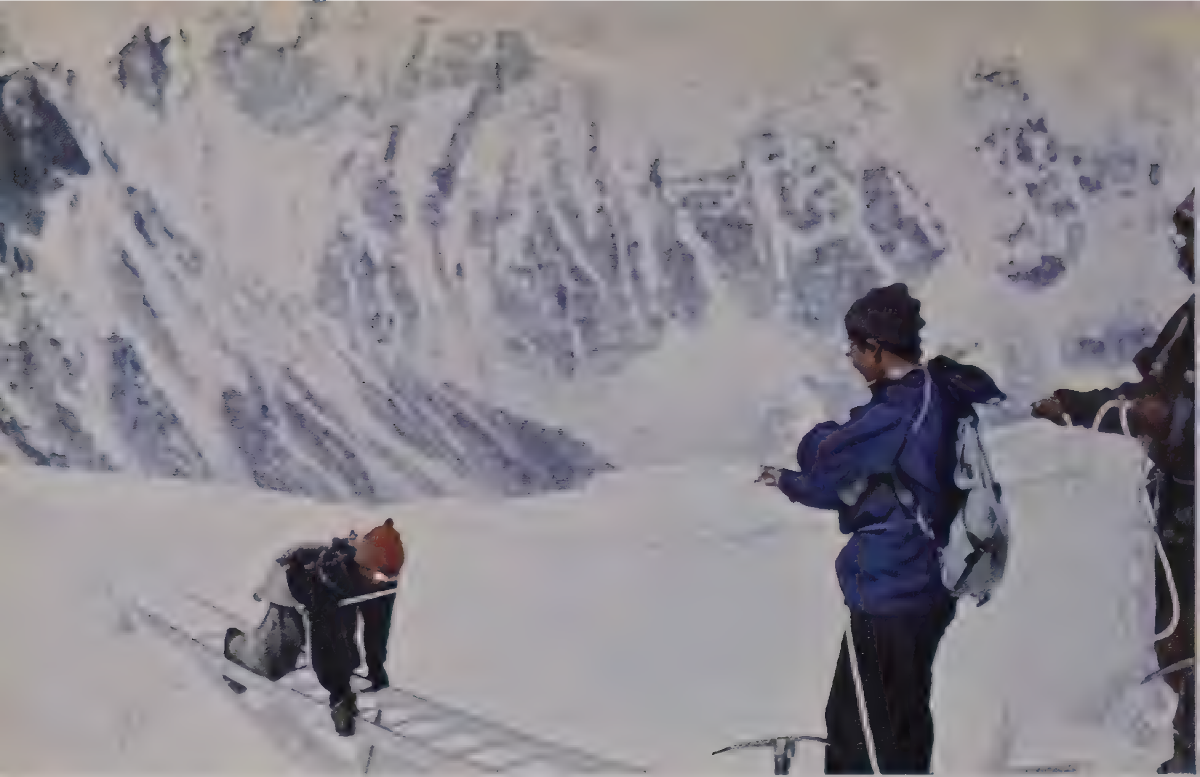
C. G. Wylie

The Sherpas are a hill people of Eastern Nepal, closely related to the Tibetans in race, customs and religion. Their real home is in a small area around Namche Bazar, but for many years they have periodically sought work of all kinds in Darjeeling, whence the pre-war Everest expeditions set out. As a result their unusual courage, toughness and climbing ability were noticed long ago, and they have played an important part in most attempts on Everest, both as porters and as mountaineers. Their womenfolk also act readily and efficiently as porters, and some of them are able to carry astonishingly heavy loads. The Sherpas, both men and women, are great humorists, being especially fond of practical jokes; and their abundant cheerfulness contributes to their value in mountaineering expeditions, for it makes them easy to get on with—a great asset in circumstances where the nervous as well as the physical strain is often almost intolerable.

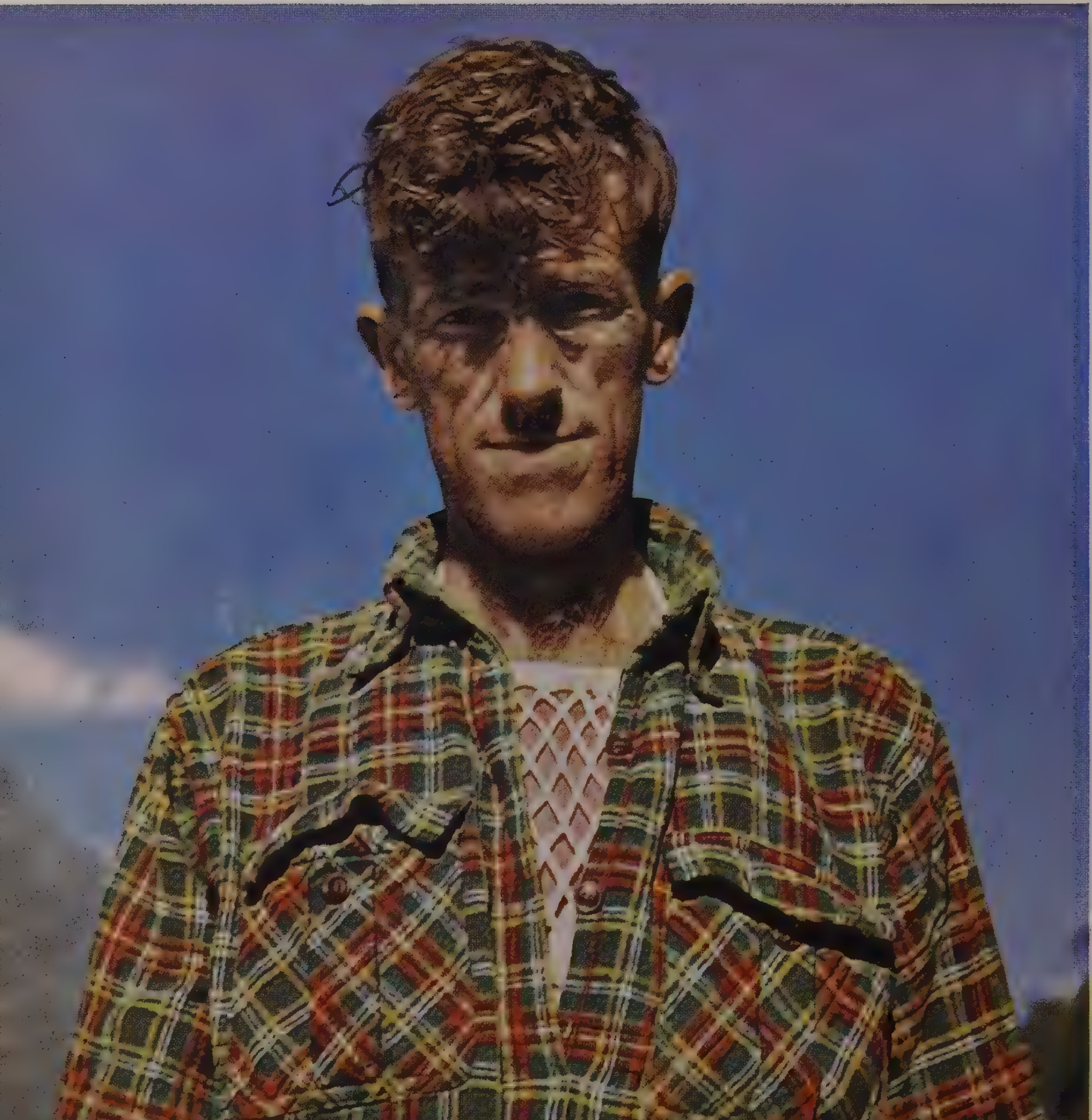
The 1953 Everest expedition took a large quantity of food, stores and equipment, weighing altogether some 8½ tons. Not unnaturally the Sherpas played an important part in carrying it, but from Katmandu to Namche Bazar their work was shared by over 300 Nepalese coolies. These were then paid off, and the work was shouldered by the Sherpas, who carried the supplies, including a large quantity of food, to the base-camp (opposite) *and beyond. Some idea of the quantity of material involved in the expedition can be gleaned from the fact that enough food had to be transported to Camp 4 to enable about thirty-five men to live there for up to two weeks. There were three sorts of rations: the Sherpas lived largely on an indigenous cereal, the Europeans had Army 'Compo' rations for everyday consumption, while, on the final stages of the*

C. G. Wylie

ascent, 'assault' rations were issued. In addition to food there were other vital adjuncts of the expedition, such as oxygen cylinders—which were unwieldy to carry over treacherous surfaces—bedding, tents and paraffin stoves, which were used to melt snow and obtain drinking water; for thirst is a terrible problem at great altitudes. The going was difficult at all points, since a way cleared one day was liable to be obliterated by the next morning, while several huge crevasses had to be negotiated with the help of aluminium ladders



(Above) *A party of Sherpa porters using one of the special light sectional aluminium ladders taken by the 1953 Everest expedition for crossing crevasses. This monstrous crevasse, barring the entrance to the Western Cwm above Camp 3, presented one of the expedition's major problems; since* (below) *it had to be crossed and recrossed several times daily whilst parties were carrying supplies to the higher camps and returning to the base for more.* (Opposite) *Another vast crevasse, in the Western Cwm itself, with a party moving up the Cwm from Camp 3 to the advanced base* (*Camp 4*)



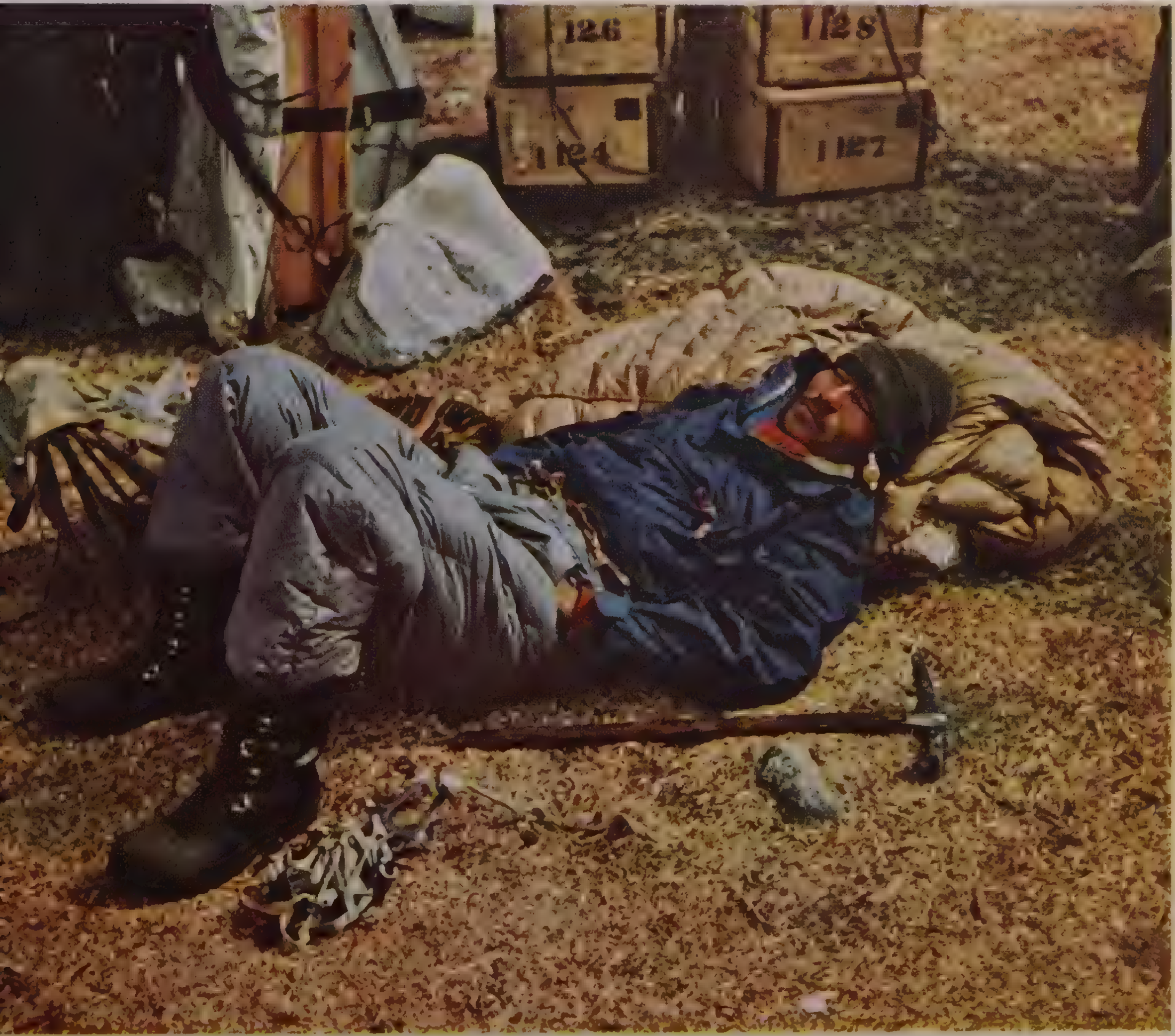
A. Gregory

Sir Edmund Hillary, K.B.E. Born in New Zealand in 1919 and served with the R.N.Z.A.F. during the war. By profession a bee-keeper, he has done a good deal of climbing in his own country. Took part both in Shipton's Everest reconnaissance expedition in 1951 and in the Cho Oyu expedition in 1952. His marriage took place in September 1953

Everest was conquered by a team, every member of which was indispensable. Some of them were responsible for transport, others for oxygen equipment, radio and photography; all were experienced mountaineers. Two pairs of climbers were selected by Colonel Hunt to attempt the final assault; and the second pair—Hillary and Tensing—succeeded

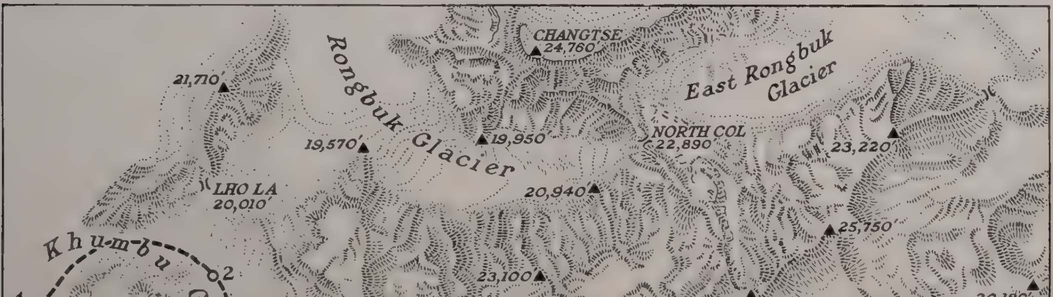
Tensing Norkey Sherpa. Born on the borders of Tibet and Nepal in 1914. He has taken part in six Everest expeditions, and during the war served as a guide and as a ski-instructor. He normally lives in Darjeeling with his wife and three daughters. In repose, his features show a determination at other times concealed by his charming smile

C. G. Wylie



The team, led by Colonel Hunt, established Camp 1 (the Base Camp) on the Khumbu Glacier, and began to accumulate supplies in readiness for the ascent up the steep ice-fall into the Western Cwm. Some time was spent in exploring surrounding peaks so as to acclimatize the party to the great altitudes. Some Sherpas were trained in the use of oxygen sets, and the team evolved plans for every stage of the assault. By the end of April a route up the ice-fall was negotiable by porters, and two more camps were pitched, one (3) on its further side, so that the way was clear for a reconnaissance of the Western Cwm. Colonel Hunt soon decided to make a further advanced base (4) on the site of a Swiss camp of the previous year, and the team began once again the arduous task of building up supplies of food and equipment. They planned to investigate the 'Lhotse face'—the wall of ice and snow forming the eastern end of the Cwm—to find a route to the 'South Col', the depression in the ridge joining Lhotse and Everest. This was done by May 6; and while stores were being moved up the Lhotse face to Camps 6 and 7, plans were hatched for the final assault. Some of the party were to establish a smallish camp (8) on the South Col, and possibly a further one (9) on the south-east ridge as a spearhead for the last lap. The assault was to be made in two stages: first, Evans and Bourdillon, using the new closed-circuit oxygen sets, were to reconnoitre the south-east ridge; if they failed to reach the summit, the second pair (Hillary and Tensing), using open-circuit apparatus, were to make an attempt. Evans and Bourdillon duly started out early on May 26 and returned late in the afternoon. Evans's oxygen set had been giving trouble, and both men were exhausted; but they had climbed higher than any men before them. Two days later Camp 9 was pitched and Hillary and Tensing prepared for the second attempt. They started from Camp 9 at about 6 a.m. on May 29, and at 11.30 a.m. they stood on the summit.

(Opposite) *An air view of the entrance to the Western Cwm, looking over the Khumbu Glacier. In the centre is the ice-fall, with Everest to the left and Nuptse to the right. Beyond Nuptse, at the far end of the Cwm, rises Lhotse; the steep wall of ice and snow leading up to it, and the 'South Col'—the depression in the ridge joining Lhotse to Everest—are both clearly visible*



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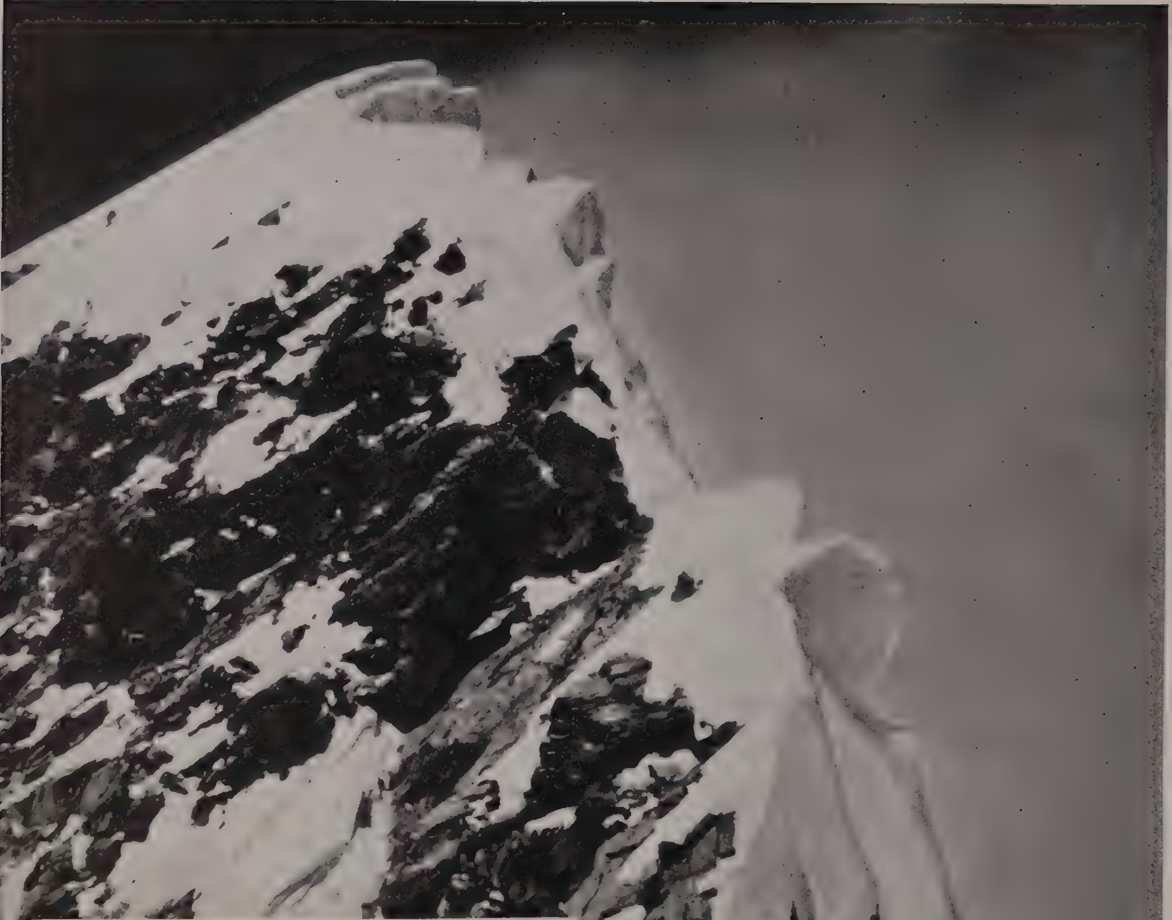


The Times. *World copyright reserved by Himalayan Committee*

A month after Hillary and Tensing had climbed (above) *the final ridge with its contorted cornices overhanging the 12,000-ft drop of the north-eastern face, they and Colonel Hunt were presented at a ceremony in Delhi with specially struck gold medals by the President of India, Dr Prasad. Colonel Hunt's citation included these words: "Under his leadership the members of the expedition were welded into a team in which each man selflessly pursued his allotted task. As a result of this leadership and team spirit, two of the team were finally enabled to reach the summit of the highest mountain of the world".* (Left) *The Prime Minister, Mr Nehru, greets Hunt and the members of his team*

By Courtesy o Life *International; copyright Time Inc., 1953*

Thomas Bewick, Northumbrian

by MONTAGUE WEEKLEY

The bicentenary of Bewick's birth is being celebrated this year by various exhibitions including one, from September 25 to November 14, at Bethnal Green Museum, a branch of the Victoria and Albert Museum. Mr Weekley has written a new biography of Bewick, recently published by the O.U.P. (All Bewick's wood engravings here reproduced are about a third larger than their original size)

THOMAS BEWICK owes his fame to the wood-engraved illustrations for two popular books on natural history which he projected, *A General History of Quadrupeds* (1790) and *A History of British Birds* in two volumes (1797 and 1804). In the *Birds* Bewick further developed the most distinctive feature of his work, the tail-pieces, minute vignettes of Tyneside life and landscape which he had first introduced into the *Quadrupeds*.

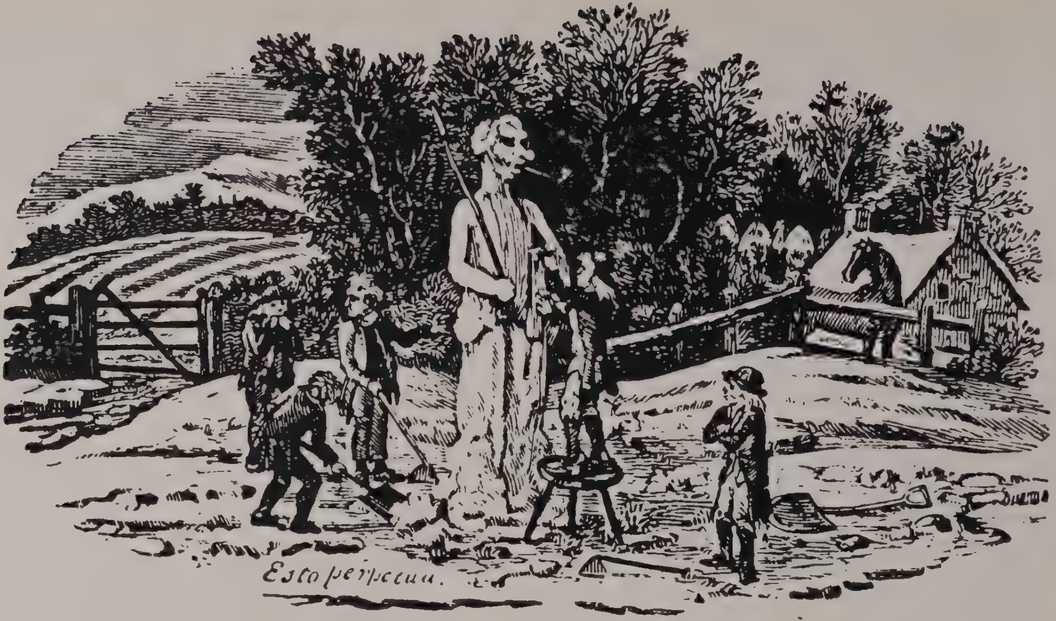
Woodcut, the earlier method of printing from wood blocks, consisted in making a wooden stamp by carving lines in relief with a knife on a block of some comparatively soft wood that would yield an impression on paper when inked and printed under pressure. It was essentially a means of reproducing pen drawings and is chiefly associated with Dürer and Holbein. Wood engraving, an early 18th-century innovation, is wrought by ploughing up narrow grooves with the sharp point of a steel graver in the very hard end-grain surface of boxwood. Whatever is thus cut away will appear white, when the block is inked and printed, because it lies below the inked surface brought into contact with the paper. The process is, in effect, a method of engraving in white lines and the designer's own work on the block is required if he is fully to realize his concept.

Cherryburn, the small farm in the Tyne valley where Bewick was born round about August 10, 1753, is roughly twelve miles up the river from Newcastle. He was the eldest child in a family of three brothers and five sisters. Parts of his cottage birthplace survive as outhouses to a larger dwelling built close to it during the early 19th century. The father, John Bewick, also rented a small colliery at the neighbouring village of Mickley. Coal and farming are still the chief sources of livelihood on this stretch of the Tyne valley's higher and steeper south bank. His autobiography, *A Memoir of Thomas Bewick, Written by Himself*, is the unique account of an artist-tradesman's life in the England of George III. The *Memoir* is at its very best in describing his tough, open-air upbringing at Cherryburn, his wild escapades, and the instinct that impelled him to a close observation of birds and beasts in these "whinny wilds". With this strong interest went an early passion for drawing. Bewick affords an extraordinary instance of spontaneous development, for a peasant household strenuously occupied with the labours of colliery and farm, could not be an encouraging *milieu* :

"My father, also, found a deal of fault for 'mispending my time in such idle pursuits'; but my propensity for drawing was so rooted that nothing could deter me from persevering in it; and many of my evenings at home were spent in filling the hearth-stone with my chalky designs."

Among Bewickiana in the Victoria and Albert Museum is the interleaved copy of the *Birds* which belonged to Bewick's daughter Jane, wherein she inked over pencilled notes by her father describing places, persons, and happenings, depicted in some tail-pieces. Cherryburn is the subject of the vignette reproduced on page 310. To the right of the horse's head is the window of Bewick's room: "From the little window at my bed-head, I noticed all the varying seasons of the year; and, when the spring put in, I felt charmed with the music of birds, which strained their little throats to proclaim it."

After a spell at Mickley's village school, Bewick was sent to one kept by the Rev. Christopher Gregson, the parson at Ovingham on the opposite (north) bank. Bewick's genius is intensely native and his markedly Northumbrian flavour is enhanced by a variety of circumstances. His name, for instance, derives from the Anglo-Saxon *bēo wīc*, bee-farm. In the


Esto perpetua.

All Bewick engravings by courtesy of the Victoria & Albert Museum

Cherryburn: to the right of the horse's head is the window of Bewick's room

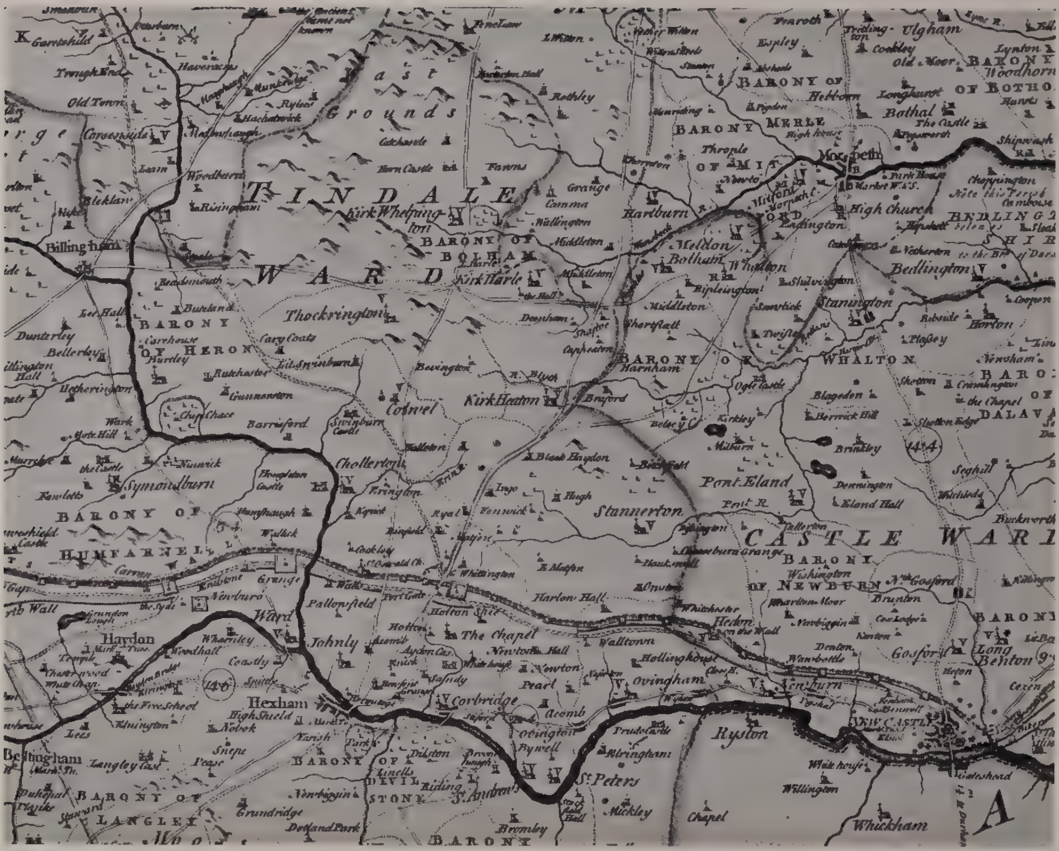
Tyne valley, from Ovingham to Hexham, stand early churches, monuments of Northumbria's Christian culture which Aidan and Cuthbert created during the 7th century. St Mary's Ovingham, with its late Saxon tower, is typical of them. Such churches and ruined castles, the border strongholds of that region, appear in many of Bewick's tail-pieces. Bywell, about three miles up the river from Ovingham, must be one of the loveliest places in England. Its castle is shown behind the fisherman with a trident on the opposite page. The exterior of Ovingham's 17th-century vicarage is little changed since Bewick's day. A fine upper room overlooks the Tyne and is said to have been the schoolroom. A terraced garden, rising above the river bank, is connected with one of Bewick's schoolboy adventures: "After a great flood, a large piece of ice, about the size of the floor of a room, had been left in a place called 'Ned's Hole', by the side of the river. This I got upon, and persuaded several others to do the same, and we then set to work with a 'boat stower' to push it off shore; and, in this manner, we got some distance up the river, opposite to the parsonage garden, where our master happened to be, and saw us. I could see by his agitated motions, and his uplifted hands, that he was put in a state much easier to be felt than described." Ovingham, where Bewick is buried, was always the centre of his roots in the Tyne valley and at this distance of time it holds more of his life-story than any other place associated with him.

Bewick's schooling with Gregson added a little Latin to his limited education. At the age of fourteen, he was apprenticed to Ralph Beilby, then the only engraver in Newcastle. The Beilbys, of whom four brothers and one sister are known to have taken to design and crafts, were a talented family. Beilby glasses, domestic pieces exquisitely painted in enamels mainly by Ralph's brother and sister, William and Mary, are greatly prized by collectors. "The first of October was the day fixed upon for the binding. The eventful day arrived at last, and a most grievous one it was to me. I liked my master; I liked the business; but to part from the country, and to leave all its beauties behind me, with which I had been all my life charmed in an extreme degree,—and in a way I cannot describe,—I can only say my heart was like to break; and, as we passed away, I inwardly bade farewell to the whinny wilds, to Mickley bank, to the Stob-cross hill, to the water banks, the woods, and to particular trees, and even to the large hollow old elm, which had lain perhaps for centuries past, on the haugh near the ford we were about to pass, and which had sheltered the salmon fishers, while at work there, from many a bitter blast."

Through Beilby's workshop in St Nicholas' Churchyard, Newcastle, flowed a medley of engraving jobs, clock-faces, coffin-plates, stamps, domestic silver, seals, bill-heads, etc. It was a

A scene on the River Tyne, with Bywell Castle in the background

On the skyline is the tower of St Nicholas' Church in Newcastle

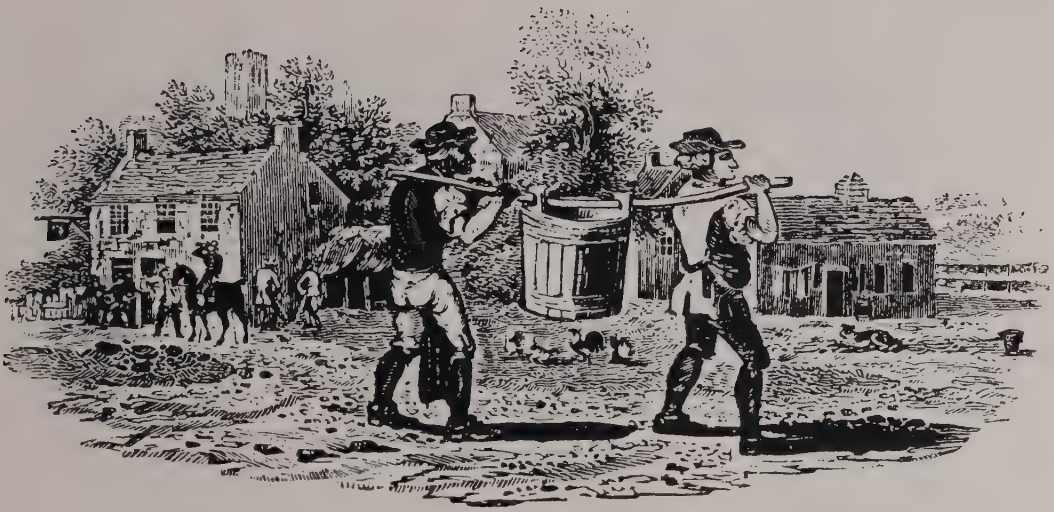


British Museum

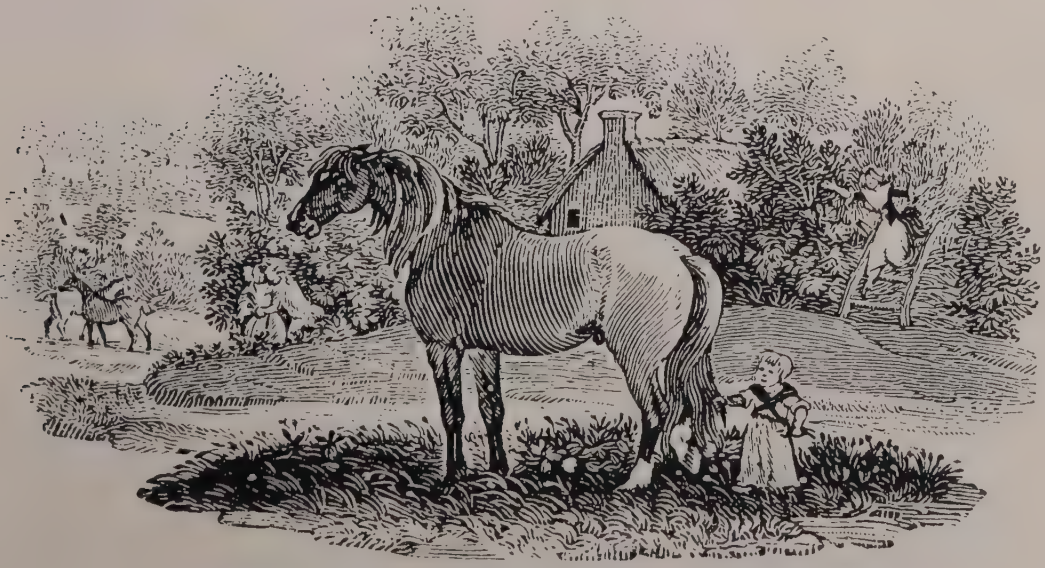
rigorous training, and since Beilby had neither a liking nor an aptitude for wood engraving, such jobs were given to his apprentice; "It happened that one of these,—a cut of the 'George and Dragon' for a bar bill,—attracted so much notice, and had so many praises bestowed upon it, that this kind of work greatly increased, and orders were received for cuts for children's books; chiefly for Thomas Saint, printer, Newcastle, and successor of John White, who had rendered himself famous for his numerous publications of histories and old ballads. With the singing of the latter, the streets of Newcastle were long greatly enlivened; and on market days, visitors as well as the town's people, were often highly gratified with it." Such were Bewick's beginnings in the craft by which he became famous, enjoying the advantage of association with the Beilbys, but a self-taught draughtsman who "was never a pupil to any drawing master".

During the seven years of his apprenticeship Bewick grew up into a stalwart 'six-footer': "I thought nothing of leaving Newcastle after I had done work—7 o'clock—on a winter's night, and setting off to walk to Cherryburn [about 12 miles]." He had, in accordance with custom, begun by residing under the Beilby roof. "When the time came that I was to cater for myself upon four shillings and sixpence per week, I went to lodge with my aunt Blackett who, being the widow of a freeman," was entitled to keep "a cow upon the Town Moor and I was abundantly supplied with milk, which was the chief thing I lived upon." His working hours were spent beneath St Nicholas' tower with its 15th-century lantern spire which recurs in his engravings (page 310). The Newcastle of that day was still largely a mediaeval city, entered through gates in towered walls. A 14th-century bridge across the Tyne between Newcastle and Gateshead was wrecked during Bewick's apprenticeship by the flood disaster of 1771.

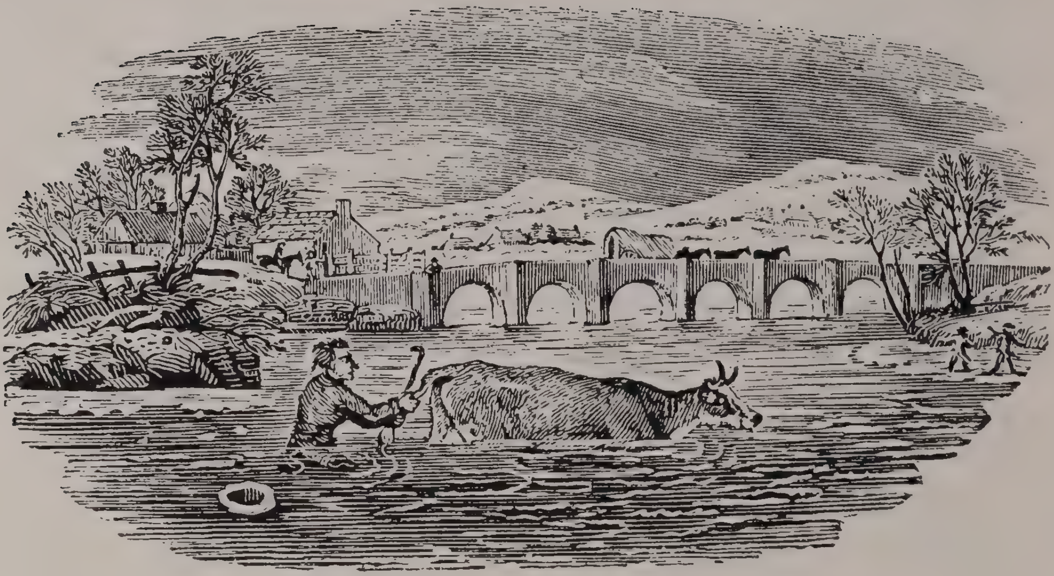
At the end of his seven years with Beilby, some of Bewick's wood-engraved book illustrations won him a prize from the Society for the Encouragement of Arts. He returned to Cherryburn where he continued to work with his graver, but he also spent much time in the company of friends and was able to enjoy days of fishing, "my favourite—and, indeed, only



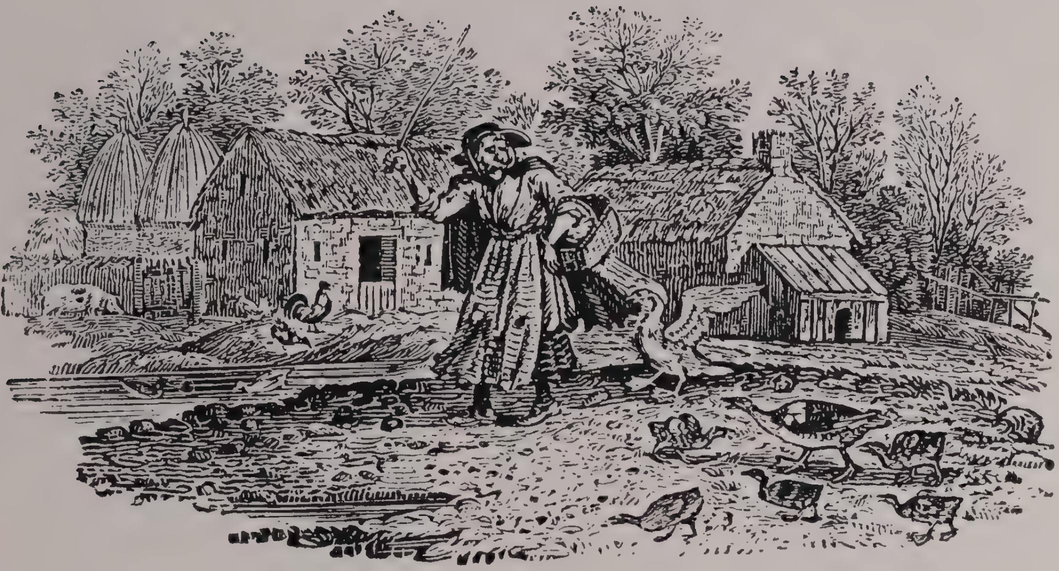
Two Ovingham dyers, Dobson and Carr, carrying chamber-lye



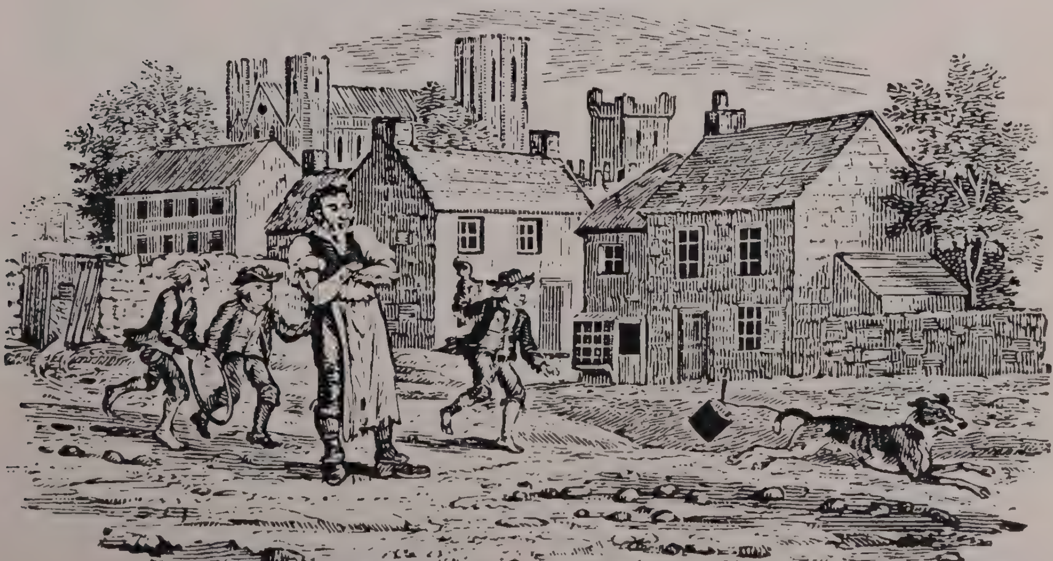
"The Dangerous Colt." The child is Bewick's younger brother, John

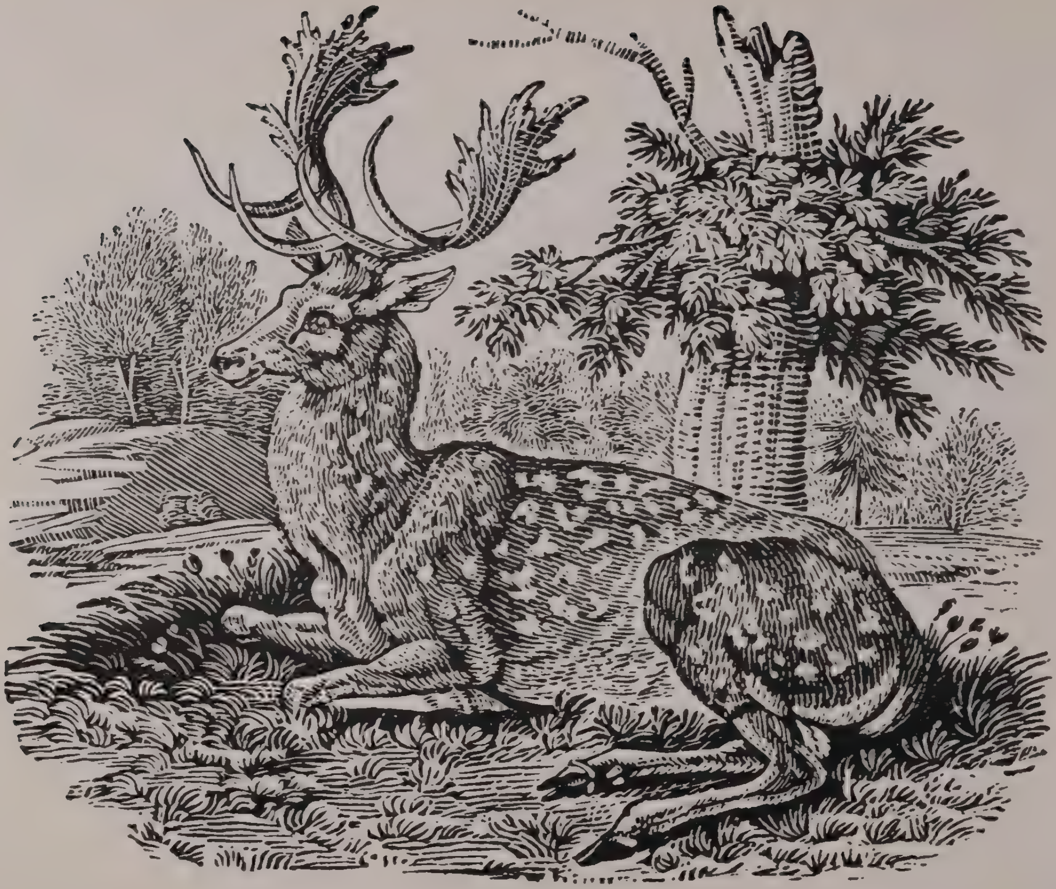


Several of Bewick's vignettes show methods of crossing the streams of his native countryside—



—others the stone buildings of its farms and small towns, with a foreground of lively incident





Fallow Deer. From A General History of Quadrupeds

—diversion." Fishermen in the Tyne and its many small tributaries figure prominently in the tail-pieces. By June of 1776, however, he became restless and set off on a long tramp through Northumberland, Cumberland, and parts of Scotland. He visited the Edinburgh pictured in *Guy Mannering*, putting up at the George at Bristoport, the inn at which Scott describes Mannering and Dominie Sampson as having stayed. The *Memoir* contains a lively record of Bewick's walking tour through part of the Western Highlands. Back at Cherryburn, he waited only a few weeks before completing his wander-year by taking ship for London, where he had lodgings in Holborn and found ample employment. London, however, he loathed, sharing Cobbett's abhorrence of "the great wen". Among Bewick's employers in London was Isaac Taylor, one of the leading engravers at that time, who remonstrated angrily with him when this promising northerner announced after nine months that he was determined to return to Northumberland: "I told him that no temptation of gain, of honour, or of anything else, however great, could ever have any weight with me; and that I would even enlist for a soldier, or go and herd sheep at five shillings per week, as long as I lived, rather than be tied to live in London." This, incidentally, was the London of Reynolds, Garrick, Sheridan, Burke, Gibbon, Johnson, Gainsborough, and Chippendale, among others. So it came about that Bewick, perhaps with an inner conviction that the fashionable world of London was not his oyster, turned his back resolutely on the encouraging prospect that seemed to stretch before him, and attached his genius irrevocably to the Tyne valley, to the face of a countryside that has, to some extent, remained Bewickian. Apart from churches and castles, there are farms and cottages in the Bewick country which seem to have emerged in solid shape from tail-pieces in the *Birds*.

On his return from London, Bewick entered into partnership with Ralph Beilby. His first apprentice was his younger brother John Bewick, who had also become a wood engraver and a charming illustrator of children's books when consumption carried him off at the age of thirty-five. The rest of Bewick's life, from 1777 until his death at the age of seventy-five in 1828, was eventful only for the conception and production of the works by which he won fame without fortune. In 1786 he married and set up house in his "little happy cot at the Forth", where he had lived for a few years before his marriage. The expansion and rebuilding of Newcastle after Bewick's day engulfed the Forth in the area where the central railway station now stands. At the first census of 1801 the population of Newcastle was 28,294; by 1931 it had increased to 288,255, more than ten times that of 1801. Drawings of the workshop in St Nicholas' Churchyard, where a black replica of Baily's white marble bust of Bewick stands in a niche with an inscription marking the site, show a typical 17th-century house with a pair of dormer windows.

Apart from pages chronicling the preparation and printing of the *Quadrupeds*, the *Birds*, and the *Aesop of* 1818, the *Memoir*'s disjointed account of Bewick's middle and later years might have been a fascinating record of a master craftsman's existence in a northern city. Unfortunately, Bewick, a left-wing Whig and a thoroughgoing puritan, had a deplorable urge to preach on ethics, sociology, and religion. The autobiographical thread is progressively lost and finally disappears in a series of homilies. Only here and there are passages evoking the routine of his daily life in Newcastle. Here is one describing a club which met at Richard Swarley's tavern in the Groat Market, an old inn which still survives: "About the year 1790, I became a member of 'Swarley's Club', held in the evenings at the Black Boy Inn. This was the most rational society or meeting I ever knew. The few rules which bound us together were only verbal. The first was that every member should conduct himself with decorum, and as a gentleman. If anyone transgressed in this point, he was immediately fined, and if he did not pay, he was sent to Coventry, or dismissed.

Magpie. From A History of British Birds

On entering the room, every member paid fourpence, which was to be spent in refreshment. Any member might introduce his friend at the same expense. There were no fines for non-attendance and no regular debatings allowed on any subject but such as might occasionally arise out of the passing conversation, and the company separated at ten o'clock. Conversations among the friends thus associated,—consisting of merchants or respectable tradesmen,—were carried on without restraint, and only interrupted for the moment while the President claimed attention to any particular news of the day that might be worth notice. Such a place of meeting proved convenient and pleasant to many a stranger who visited the town, and the expense was as nothing. It may seem strange that, out of a fourpenny club like this, there was commonly an overplus left, to give away at Christmas and Easter to some charitable purpose."

The *Memoir* tells us almost nothing of family life in the house Bewick rented at the Forth, where his son and three daughters grew up. In 1812, his sixtieth year, the "cot" was put up to auction and Bewick was outbid by a prosperous grocer, whereupon the family moved to a newly built house on the steep slope in Gateshead that ascends from the bridge connecting Newcastle with Gateshead. The site is now occupied by the Gateshead Post Office.

The *Quadrupeds*, the *Birds*, and the *Aesop* were the extraordinary by-products of a miscellaneous engraving shop and much of the work on them had to be undertaken in the evenings at home. When he had long become famous, Bewick was still labouring on with bill-heads, bar-bills, all manner of metal engraving, and such coarse jobs as bottle moulds, the matrices into which glass bottles were blown. Beilby, whose partnership with Bewick was dissolved in 1797, had a literary bent and was interested in natural history. The texts of the *Quadrupeds* and the first volume of the *Birds* were mainly compiled by Beilby; with some help from other sources, Bewick himself prepared the text for the second volume. As popular introductions to natural history, these books have, of course, become obsolete. Bewick's figures of birds and beasts were successful insofar as the living species was thoroughly familiar to him, but Bewick, the Northumbrian, has eclipsed Bewick, the naturalist. In the tail-pieces Bewick's creative impulse was untrammelled. They comprise a unique achievement, a miniature panorama of regional life and landscape endowed with the cardinal magic of genius, a universality that eludes time's clutches.

"*How well at another time he describes the poor sheep that had got the tick and had tumbled down in the agonies of death. It is a portrait in the manner of Bewick, with the strength, the simplicity, and feeling of that great naturalist*"

William Hazlitt: Essay on Cobbett

Raw Material of Democracy

by R. M. FOWLER

The title of this article implies certain assumptions about democracy in relation to the use of newsprint, the substance to which it refers. Some of them are examined in Mr Francis Williams's article in the present number. Others relate to the production of newsprint; a subject on which Mr Fowler, President of the Canadian Pulp and Paper Association, writes with expert knowledge

In the Nova Scotia hamlet of Upper Sackville, a cairn honours the birthplace of Charles Fenerty, the first Canadian to produce paper from wood fibre. Inspired by the papermaking of wasps, this young farmer, using a grindstone, reduced wood to fibre which he mixed with water to form a pulp. When the pulp dried it became the first paper made in Canada of anything but rags. The fundamental phenomenon of papermaking, of course, is that wood fibres when wet will adhere one to the other as they dry.

Although the Nova Scotian did nothing further with his invention, he did observe that "our forest trees, either hard or soft wood, but more especially the fir, spruce, or poplar" might be made into the finest paper. Today there are mills which use twenty or more species of trees; and the manufacture of pulp and paper from wood has become an industry so vast that its importance to Canada as a source of wealth and employment is greater than that of any other industry. Excluding the banner crop year of 1952, Canada's pulp and paper production has exceeded in value her output of all grains, including wheat. It also exceeds in value the output of all Canada's minerals, precious and non-precious, metallic and non-metallic. And more than half of the nation's vast output of pulp and paper consists of newsprint, the raw material of the newspaper, of which Canada provides more than five times as much as any other country.

Newsprint has been called "the raw material of democracy". The dissemination of accurate news through independent newspapers, free to criticize governments and to report and condemn the abuse of power, is the essence of the way of life evolved in Maritime Europe and in North America. Without adequate newspapers it would be difficult either to maintain or to spread our democratic ideals.

Newsprint paper accounts for fully one-third of the cost of producing newspapers. Today a mile of newsprint, twenty feet wide and worth about £20, is produced by a modern paper machine in about three minutes. No other kind of paper can be produced in such quantity and at so low a price.

Because newsprint is Canada's largest industry and most valuable export, the flow of economic life in Canada depends to a great extent on the demand for newsprint from the press of the world in general, and in particular from the newspapers of the United States. To British eyes these may appear to be strange bazaars wherein is mingled every sort of diversion, from comic strips to novelettes. Foreign news or the intelligent editorial may be obscured by the cries of the hawker announcing the Smashing Reduction of an $8.50 dress to $8.49 or the even more strident cries of the charlatan implying that the use of his soap can win a maid a man.

All this hodge-podge of news, entertainment and advertising may be discouraging to those who forget that in America it is regarded as the fun of the fair, and that the daily or weekend newspaper is the only form of prose reaching millions of families for whom it is the sole source of literature, diversion and shopping information, as well as of news. The role of the American press as an advertiser of goods is of great social and economic importance, for its mass circulation has built up the markets without which mass production would have been impossible.

Although Great Britain has the highest circulation of newspapers sold daily per thousand inhabitants, the United States has by far the largest *total* of copies sold daily, 52,845,000, and some of them run to as many as 150 pages each, compared with a dozen pages or less in British papers. Thus, out of a total world production of 10,291,000 short tons (of 2000 lbs) in 1951, the United States consumed 5,975,000; and this overwhelming preponderance of the American demand for newsprint, to which I shall revert later, has existed for at least the past thirty years. But, as will be seen from Mr Francis Williams's article in the present number of this Magazine, the rest of the world market, both actual and potential, is very large and the annual increase in populations, with the steady spread of literacy, means that there is a growing demand for newsprint. Where is it to come from?

Much of it will come from Canada. Cellulose, which is the basis of wood-pulp, can be obtained from other natural fibres like grass, straw and the leaves of trees. The problem is to extract the cellulose cheaply and to leave enough strength in the fibre to prevent the web of paper from breaking when it is being printed. For this purpose no practical alternative to timber has yet been found. Wood-pulp can be made from a variety of timbers and, indeed, hardwoods are already being used for pulp production both in Canada and in the United States. But softwoods are the traditional and more convenient timbers and Canada's coniferous forests have great advantages for their production. About one-third of Canada is covered by forests—1,320,000 square miles of them—and over half of the forest lands are capable of producing continuous timber crops. It has been estimated that by good forest management these lands could produce two or three times as much pulpwood per acre as they do now; whereas it appears that the forests of Western Europe cannot produce much, if any, more pulpwood on a permanent or 'sustained yield' basis. Russia hardly seems to be a dependable source and in any case her forests are likely to be needed for her own increasing requirements. The coniferous forests of the United States have been overcut. Thus Canada (with Alaska) remains the only part of the "Free World" having extensive coniferous forests that can readily be made more productive, although it may be found possible in the years to come to utilize the hardwood forests of the tropics and the eucalyptus of Australia for making newsprint. There are, however, formidable difficulties, since it costs more to grind hardwood than softwood and abundant cheap power is needed to convert hardwood timber to newsprint at an economical cost.

The companies which lease their woodlands from the Crown are well aware that Canada's forests as a whole are being consumed at a rate not far below their annual growth; thus forest management has now become a highly skilled and costly part of the pulpwood industry. It begins with the taking of forest inventories by air photography, supplemented by the work of ground crews. The original inventory, for example, of 7000 square miles of timberland cost one company approximately $600,000 and the subsequent periodic inventories have cost $100,000 apiece. The resulting data, including maps and tabulations, may take twelve months to prepare, for submission to government officials when the companies get annual approval of their cutting plans. Important items, also, are fire protection, and spraying against insects and disease (which cause twice the damage that fires do); fires, insects and disease between them accounting for 20·5 per cent of the annual forest depletion in Canada.

As regards development, the Canadian forests have notable physical advantages. The chief requirements are low-cost transportation of the logs to the mills, cheap power and abundant water for the processes of manufacture. The many rivers that flow through Canada's forest regions provide all these. From the standpoint of the creation of national wealth, the conversion of trees into pulp and paper is the most profitable way in which Canada's forest resources may be used. Pulp and paper accounts for a fifth of the average annual wood consumption in Canada—equal to the loss caused by fires, insects and disease; equal to the wood cut for fuel; and about two-thirds the quantity used for lumber. Yet the pulp and paper industry creates far more new wealth annually for Canadians than all the other forest industries combined.

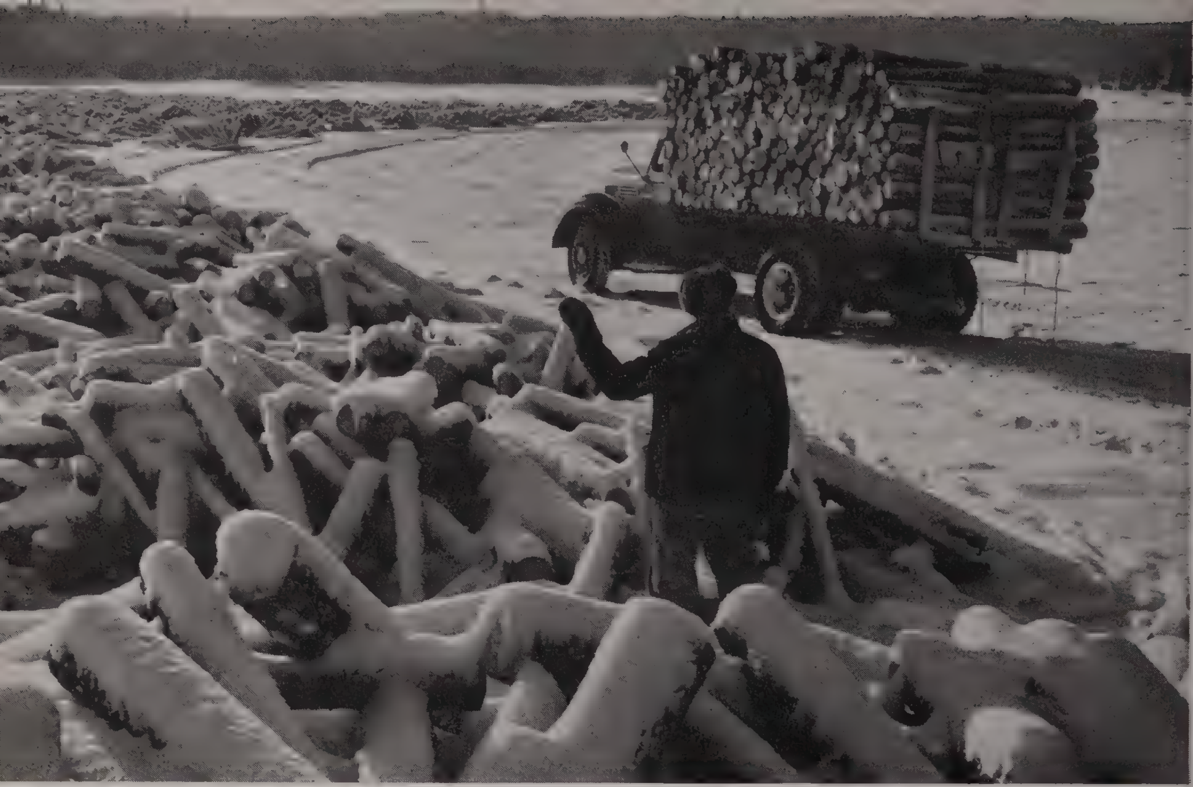
Competing with newsprint mills for the available supplies of pulpwood are the producers who make pulp for sale and for turning into other wood-pulp products such as fine paper, wrapping paper, paperboard, cellophane, rayon, photo-film and many plastics. In all, the Canadian pulp and paper industry produces about a thousand products ranging from milk-bottle caps to banknote paper, from cigarette paper to blotting paper, from building papers and boards to fine book and writing papers. Its by-products include yeast, turpentine, road binders, and commercial alcohol.

In the cutting methods employed to provide this protean production, the woods managers of pulp and paper companies base their decisions on the most up-to-date scientific knowledge available to them and to the government foresters acting on behalf of the Crown. The age of the stand, soil conditions, and the possibilities of future growth all affect the methods employed. The government determines the minimum diameters of the trees to be cut, how much of the tree is to be utilized, and the maximum height of the stump. They seek, and so do the operators, a maximum crop from a minimum of cutting, and achieve it by means which are as much improved from former forest management methods as is the lot of the modern woods worker as compared with that of his forerunners.

Forty years ago when with the first snow

anada Wide Photo Ltd

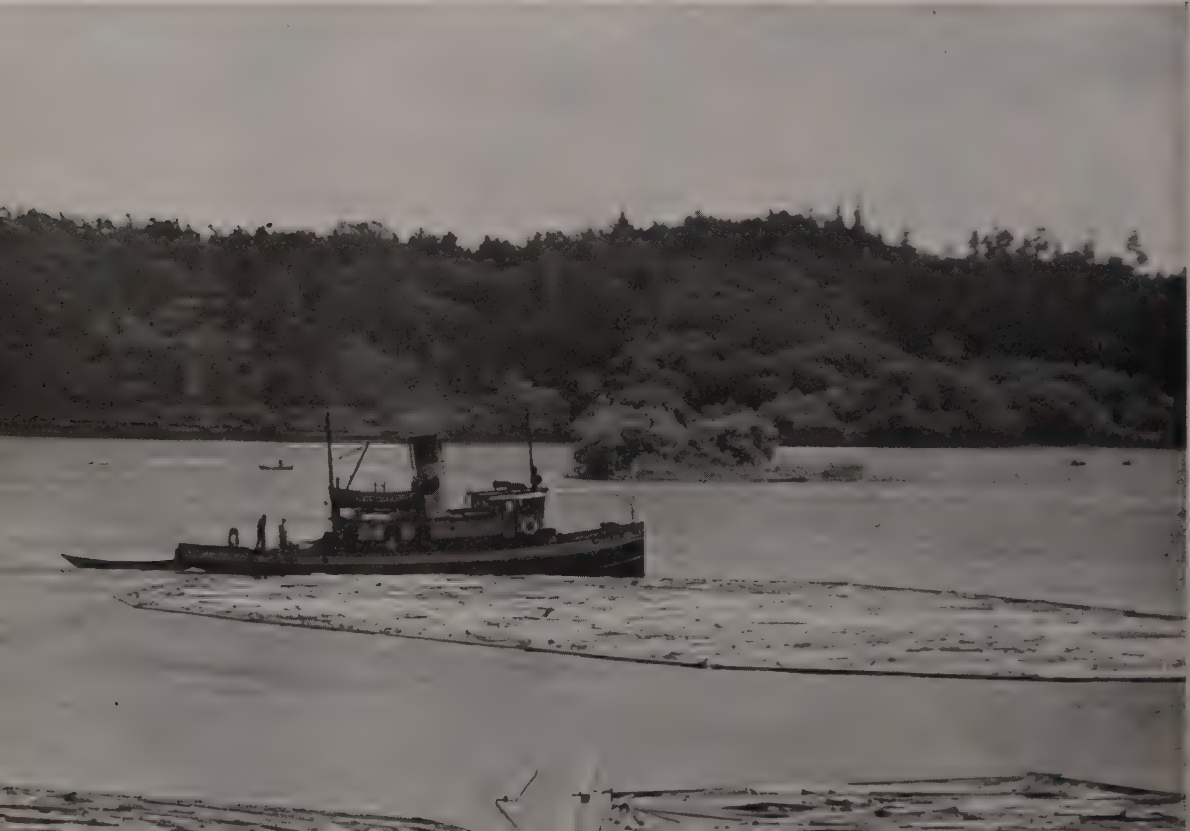
Modern lumberjacks have many advantages denied to their predecessors. (Above) *These wooden huts compose a mobile camp that can be dragged by a tractor to a new location when cutting in the old one is finished. The huts are drawn on runners over the snow, which makes movement in winter through the Canadian forests comparatively simple. But though the lumberjack's life may be easier than it was in former days, his work demands just as much skill, from the first notch* (right) *to the moment when the tree falls in a place where it can be sawn up, piled and then collected. The logs are piled so that the cutter's wages and the government stumpage tax can easily be computed*



ttawa

The construction of good roads through the woods enables trucks rather than horses to be used for transporting pulpwood to the edge of the frozen waters. (Above) *Here the logs are dumped till, with the spring* *haw, they can be floated downstream, chained into 'booms'* (below) *and towed by tugs to the paper mills*

Film Board of Canada



Malak, Ott

As the pulpwood harvest flows down the waterways, drivers armed with spiked poles move the logs onward and try to keep them from jamming the Canadian lumberjack went to the woods to earn a little money, he had to walk from twenty-five to fifty miles along unspeakable roads, carrying on his back the thirty-pound pack which he needed for wintering in the bush. Today his sons take an autobus, a snowmobile or even an aircraft, reaching their jobs almost in the twinkling of an eye. The work of a woodsman is best understood by following the work of a skilled lumberjack like Telesphore Sainte-Marie.

Telesphore gets up at five in the morning and after a breakfast of porridge, bacon and eggs, pancakes, steak and maple syrup, sets forth for his day's work. He takes along his axe, bucksaw, and probably his lunch. He may have to walk anything from half a mile to two miles to the spot on which he is working. On arriving there, Telesphore follows the path or rough road he has cut till he arrives at the scene of his previous day's work. There he finds that he must cut his road out a little further in order to permit him to fell on either side of it and to stack his wood. He takes a look at the lie of the land, decides where the road should go and in which direction the trees must fall so that they can most rapidly be cut in four-foot lengths and piled beside the new road. Having cleared the road for a further distance of perhaps fifteen yards, he proceeds to clear the spruce, balsam, or jack pine on either side of it.

Before felling a tree, Telesphore quickly sizes up the situation. He has already decided where his wood will be piled. His tree must fall where it can be sawn, but it should not fall in clumps of dense underbrush, or where it would impede subsequent work. He must note the strength and direction of the wind, and take into consideration the possibility of breakage, or the dangers of felling on a steep slope.

He is expert in these matters and weighs them well at a glance. He then makes the undercut with his axe, on the side on which the tree is to fall. And, being an expert, his undercut is not just an ordinary V-notch. The lower side of his V is horizontal and the upper side is exactly at an angle of 45 degrees from the side of the tree. The depth of the cut is a quarter of the diameter of the trunk. The height of the stump will be less than six inches. And the undercut itself will be as smooth as if it had been taken out with a chisel. Not a single axe-stroke will have been wasted.

He then picks up his bucksaw—which he has filed and trued at night in the camp—and saws horizontally. He stands, not as the amateur would, but with the tree in front and on his left; he moves the edge of the saw towards himself. It takes him perhaps not more than three minutes to size up the situation, to decide on his tree, and to fell it. Whether there is anyone in his immediate neighbourhood or not, when his tree begins to fall, Telesphore has been instructed to shout out "Timber". In his case it is more likely to be "Timbair", or "*Prends garde*". Next, he removes the branches and saws the trunk into the required lengths, taking care to utilize everything in the tree down to the legal requirements.

If Telesphore is a reasonable worker, he may average about two cords a day during a season. A good man will turn out three cords. Four cords are exceptional, even for short periods.

It is in the spring that the pulpwood harvest reaches its most exciting climax. At that time the logs move down the rivers and streams to the mills. About 80 per cent of all the pulpwood cut in Canada moves on streams, at any rate for part of its journey to the mills.

After men with spiked poles have spurred the logs down as much as 200 miles of swirling streams, between hills, through lonely woods, breaking jam after jam, and after tugs hauling booms of thousands of logs have chugged their way down lake or river, the raw material reaches the mill where the bark is removed and where it is placed in a great pulpwood pile, a landmark of all Canadian pulp and paper towns.

The finest grades of paper are, of course, still made from rags and Canada produces a substantial tonnage of rag papers. The industry also produces paper made from straw and other fibres. But about 98 per cent of the total pulp and paper production—more than 9,000,000 tons annually—is made from wood.

Wood is composed of fibres, which may be seen by tearing a piece of paper, and of lignin, the binder that holds the fibres together. Wood is converted into pulp by pressing it on a grindstone, or by cooking it in an acid or alkaline liquor that dissolves the lignin in the wood. The first method produces groundwood pulp, sometimes called mechanical pulp; and the second produces chemical pulp of which three chief types are produced: sulphite, sulphate or kraft, and soda pulps. The paper in this Magazine is made from sulphite pulp. Newsprint, the paper used in newspapers, is made chiefly of groundwood pulp with about 15 per cent of sulphite pulp.

Paper is made from pulp by mixing the fibres with water, placing a layer of the mix-

Canadian Pulp and Paper Association

On its way to the paper mills, such as (above) *the Powell River Plant, Canada's largest producer, about 80 per cent of Canadian pulpwood travels at least partly by water; some is carried by rail*

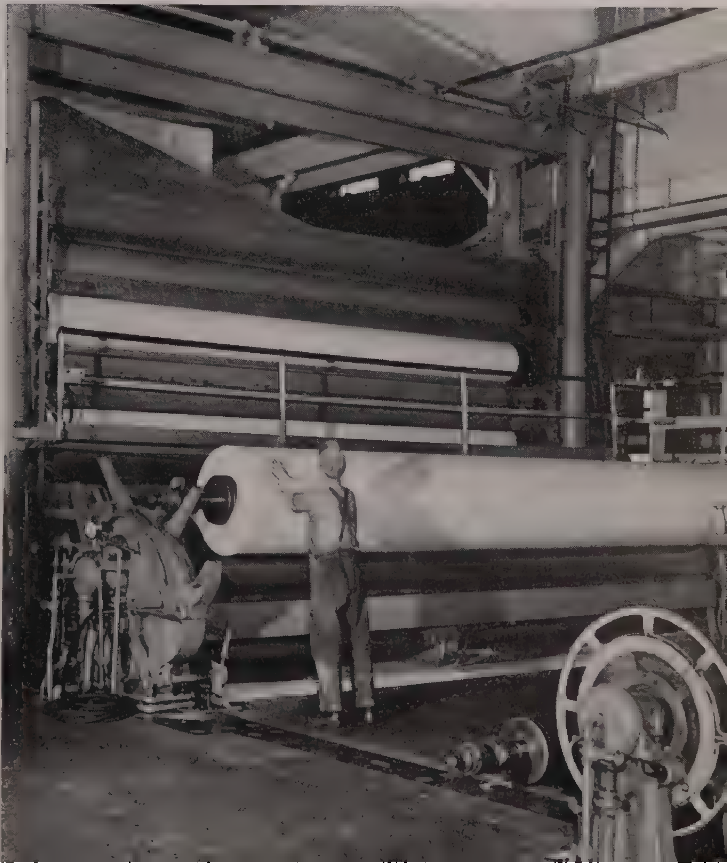
ture on a screen, draining the water off, leaving a thin mass of wet pulp, and then removing the remainder of the water from the pulp by pressure and heat. Thus the fibres mat or felt and become a compact sheet of paper.

Manufacture is carried out as a continuous process by means of machines sometimes as long as a football field. A mixture of pulp and water flows onto a continuous, moving wire screen where, as it moves onward, most of the water is drained from the pulp. Towards the end of its brief journey on the screen, the pulp has already felted. It continues its journey as moist pulp through several presses and then around a series of steam-heated cylinders which evaporate the

The conversion of logs into pulp. There are two kinds, sulphite and groundwood; newsprint consists mainly of groundwood, with a small admixture of sulphite pulp. In producing this, logs are 'chipped' (left) *and cooked in acid or alkali to remove the lignin. But in making groundwood they are pressed against grindstones and* (below) *the pulp is refined by passing it between rollers to remove impurities. Canada is the largest exporter in the world both of pulp and of newsprint*

National Film Board of Canad

t Helling



o views of paper-manufacturing machines.
bove) *At the 'wet end' the pulp is fed*
o a wire screen where some of the water
ins off. Under the two hoods in the
kground are the steam-heated cylinders
which the pulp is dried into newsprint
er. At the other end of the machine
ght) it emerges, and is wound into a
e roll more than 20 feet wide at a rate
2000 feet a minute. Newsprint compris-
14 per cent of Canada's exports; more
n 90 per cent of her output goes abroad

rest of the moisture. Finally, after passing between revolving steel cylinders, which give it a smooth finish, the sheet emerges as paper.

On a fast machine it may take only ten or eleven seconds from the time the pulp moves onto the screen until it emerges as a ribbon of paper, perhaps 25 feet wide, 100 yards away at the other end of the machine. Paperboard and some types of paper may also be made by combining a number of layers of pulp. These are formed on the wire mesh of a series of cylinder moulds revolving in separate vats of pulp and water. A felt travels by each mould picking up each layer of pulp in turn. The combined layers are then passed through presses and over dryers in the same way as has been outlined. The number of layers of pulp may be varied according to the type of paper or paperboard required.

The operation of paper-making machinery, particularly the high-speed newsprint machines, requires skill and intelligence. All told 57,000 people work in the 131 mills which comprise the Canadian industry and another 330,000, mostly seasonal workers, are employed in the annual pulpwood harvest. The production of newsprint accounts for about half of the total number of those employed.

The capacity of individual newsprint mills ranges from about 50 to 1000 tons daily. Indeed Canada has the three largest newsprint mills in the world, each with a daily capacity of some 1000 tons of paper. There are 37 newsprint mills in Canada, producing 18,400 tons every working day in the year. The story of their development goes back to the first decade of this century when the United States, requiring more and more paper, in 1909 reduced the tariff on newsprint. In 1913, the tariff was removed. Thus newsprint production in Canada, which had been practically non-existent at the beginning of this century, reached 686,000 tons in 1917 and 5,700,000 by 1952. Naturally, most of this production found a market with publishers in the United States.

Before World War II Canada sold 72 per cent of her newsprint output to the United States, 6 per cent at home and 22 per cent overseas. The war disrupted the overseas trade and the proportion of the output sold in the United States increased.

As an aftermath of the war and as a result of trade and exchange restrictions abroad, by 1950 almost 89 per cent of the Canadian output moved to the United States, 6 per cent stayed at home, and only 4 per cent went overseas. In that year, Canadian mills produced 5,300,000 tons of newsprint, but only 208,000 tons moved overseas, of which Britain took only about 50,000 tons as compared with 325,000 before the war. But British requirements are increasing again and have now reached 160,000 tons.

During the early post-war years American publishers were gladly buying their share of the ever-increasing output of Canadian industry plus any tonnage which countries overseas, owing to currency restrictions, were not able to absorb. But since 1950 the trend has been reversed and overseas markets are again taking more Canadian newsprint. In 1952 overseas markets accounted for 8 per cent of the production as against 4 per cent two years previously.

The demand for newsprint is determined not only by consumption in the United States, but by the demand in world markets. It is, therefore, significant that when U.S. newsprint consumption fell off by 28 per cent between 1929 and 1932, the world demand for newsprint declined by only 12 per cent. In short, in the world-wide business of marketing newsprint, the ups and downs in the demand elsewhere do not necessarily synchronize with ups and downs in the demand in the U.S. market. All of which tends to stabilize the demand.

From the end of the war until 1950, North American consumption increased each year by more than 7 per cent. But in both 1951 and 1952 it only increased by something less than one per cent. Nevertheless, over these two years the output of the Canadian newsprint industry increased by close to 8 per cent, owing in part to the shipment of larger exports to markets overseas. Overseas exports increased by 25 per cent in 1952 and appear to be still increasing.

It is to Canada's interest that this increase should continue, so as to reduce her dependence on a single market; and, as shown above, the Canadian industry is well able to meet any demands on its productive capacity that are likely to be made for a long time to come, as a result of the world's need for more newsprint to meet population trends; to keep pace with increasing literacy amidst backward nations; to provide an advertising medium for the increasing industrial production of the world; and to promote a form of mass communication which seems to have become an essential part of life in the West.

After Everest

by ERIC SHIPTON

Mr Shipton has explored widely in the mountain ranges of Africa and Central Asia. He has taken part in twelve Himalayan expeditions; five of these were to Everest, and his reconnaissance expeditions of 1935 and 1951 led to the discovery of the route by which the mountain was climbed

Future generations will, I believe, come to regard the climbing of Mount Everest as the beginning of a new era of mountaineering in Central Asia. Just as the climbing of Mont Blanc preceded by many decades the "Golden Age" of Alpine climbing, so the ascent of Everest may well be the precursor of a far more protracted "Golden Age" of Himalayan mountaineering.

With the highest summit in the world still to be reached there naturally developed a disproportionate interest in mere altitude. Peaks were often climbed or attempted with the main motive of establishing a high altitude record, of attaining the "highest summit yet climbed". Among Continental mountaineers, for example, the "conquest" of the first 8000-metre peak was for many years the most important objective of Himalayan expeditions. This very natural tendency led, equally naturally, to international rivalry. Now that Everest has been climbed, and with such a vast number of summits still to be reached, there is reason to hope that this competitive motive will tend to subside. As in the case of the Alps, the mere height of the mountains will have less and less significance.

Let us cast an eye over the vast field of enterprise awaiting the mountaineer in the highlands of Central Asia. To begin with there are scores of peaks exceeding 25,000 ft in height. These giants have been attempted by expeditions from many nations for nearly a century. Yet barely half-a-dozen of them have so far been climbed. In my opinion it will be a very long time indeed before the last of these great summits has been reached. Certainly far more expeditions are taking the field each year than was the case before the war; true it is that both technique and equipment are very greatly improved; but it must be remembered that those of the great peaks that have been climbed are among the least difficult and that among the great majority that remain there are some which will demand a very much higher standard of skill.

That the ascent of Everest was followed only a few weeks later by the success of the German party on Nanga Parbat, a mountain which had repelled as many attempts and claimed three times as many lives, that these outstanding events occurred only three years after the climbing of the first 8000-metre peak (Annapurna), might suggest that mountaineers have at last got the measure of these great Himalayan peaks; it may seem that, whereas in the past failure was almost the inevitable portion of climbing expeditions to the Himalaya, from now on we will see the tables turned, that henceforth peak after peak will fall to the next essay. I doubt it.

Everest and Nanga Parbat were both old opponents; they had been reconnoitred and attempted over and over again. Both had been climbed to within a thousand feet of the summit as many as twenty-nine and nineteen years ago respectively, and in the case of Everest several times since. The peculiar problems of each were well understood—the deadly north-westerly gales of the former and the tremendous snow precipitation of the latter—and it was known that each would be climbed when, but not until, a party was lucky enough to strike the right weather conditions. Though they are a thousand miles apart it is not surprising that this occurred on both mountains in the same summer. Certainly this argument does not apply to the ascent of Annapurna, but it should be remembered that this is the only case of a mountain of more than 25,000 ft having been climbed at the first attempt. There is nothing in the modern development of technique or equipment to suggest that it is likely often to occur again.

Apart from Everest there are two peaks of more than 28,000 ft. K2 (28,250 ft) is generally regarded as the second highest in the world. It is very probable that this great peak, one of the most beautiful in the world, will also be climbed soon, for its secrets too have been revealed. Its approaches were originally explored by Colonel Godwin-Austen and then by the Duke of Abruzzi, half a century ago. Two powerful attempts to climb it were made by American expeditions in the late thirties. The first, led by Dr Charles Houston, climbed to about 1000 ft from the summit and proved that there was a practicable route to the top. The second, led by Dr Wiessner, reached a point even closer to its goal, but ended in tragedy. This year a third attempt is being made by an expedition again led by Dr Houston.

Kanchenjunga (28,150 ft), so far as we can tell, is likely to prove a far tougher proposition than either Everest or K2. Despite its relative accessibility, and in spite of a great many attempts, no-one has got within measurable distance of the top. Two remarkable attempts were made to climb it from the north-east in 1929 and 1931 by German expeditions led by Dr Paul Bauer. For determination, skill and courage the stories of these are outstanding among the great epics of mountaineering. They were brilliant examples of lightly equipped, privately inspired expeditions.

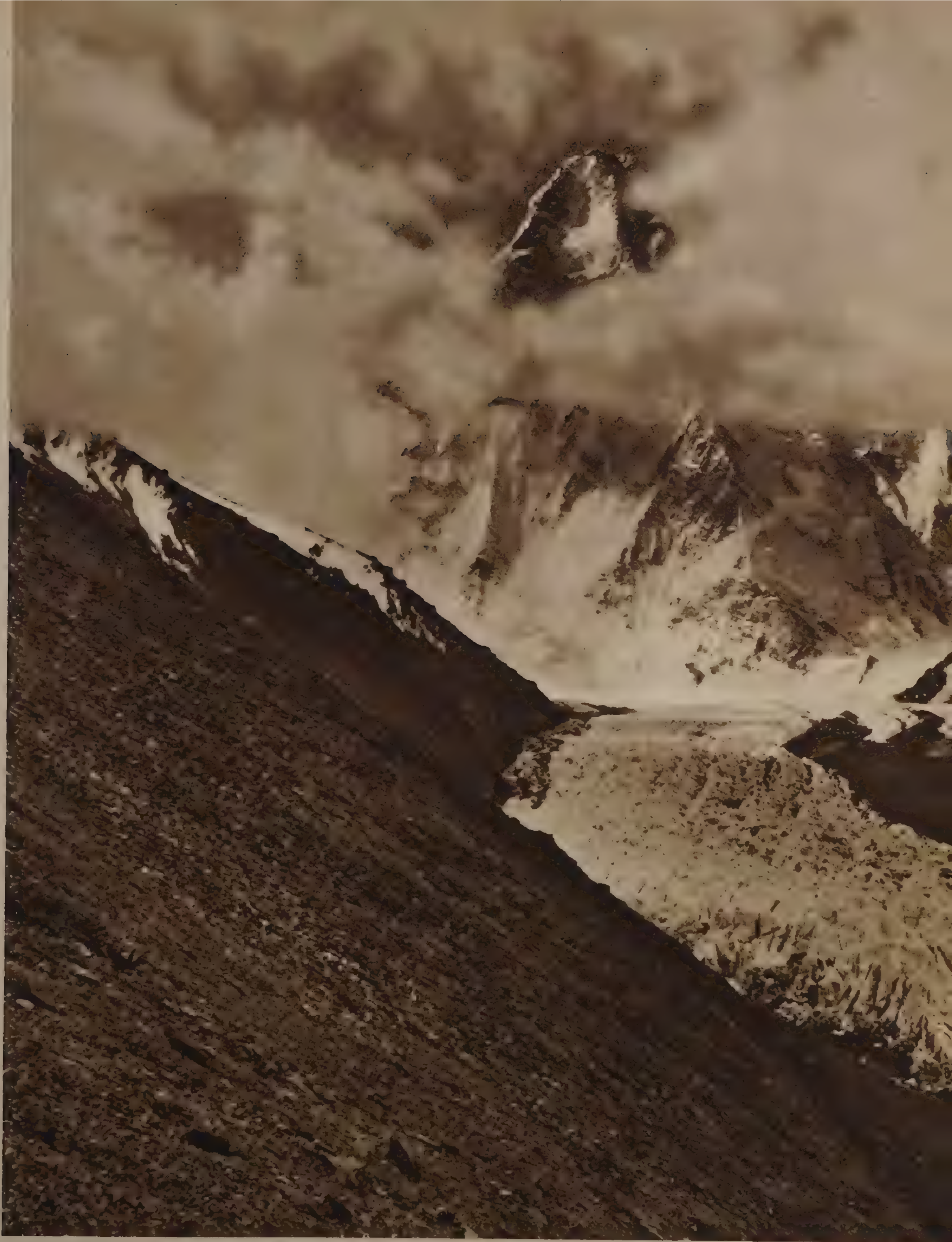
In 1930 an exceedingly strong international expedition, composed of some of the best climbers of many nations, organized and conducted regardless of cost and equipped with many unusual devices, including dynamite for the demolition of obstacles, made an attempt to climb Kanchenjunga from the north-west. The difficulties encountered were so formidable that the climbers scarcely succeeded even in effecting a lodgement on the lower slopes of the mountain.

Several more of the unclimbed giants have been reconnoitred or attempted. On some, such as Gurla Mandhata and Masherbrum, routes to the top have been definitely revealed; on others, such as Makalu and Dhaulagiri, the issue is still in doubt; though in the case of the latter the leader of the Swiss Expedition, which this year attempted to climb it, is said to have expressed the view that it cannot be climbed. But there are many, many of these giants which are still utterly unknown from the mountaineering standpoint. What kind of mountain, for example, is Ulugh Mustagh, that lonely colossus, standing more than 26,000 ft high, on the borders of Sinkiang and Tibet? What is the nature of its glaciers, of its weather? What are its special problems? It must be cold near the top in that latitude, more than 36° N. What of Namche Barwa (25,445 ft), whose remarkable geographical position at the axis of the great sweep of the Tsangpo must excite the fancy of any Central Asian traveller? One would expect to find very peculiar mountaineering conditions here. Nearer at hand, who can tell us whether or not Gosainthan (26,291 ft) can be climbed?

But it is not the great giants of the Himalaya and neighbouring ranges, but the peaks of more modest height, say between 18,000 ft and 25,000 ft, that offer the main field of mountaineering enterprise in Central Asia. While the former can be counted in scores, the latter may be numbered in thousands. The great majority of these are unnamed and unmeasured. Very many, perhaps most, have no place on any map. Some of them are far more formidable than any of the giants; indeed I can think of quite a number that I have seen—such as Ama Dablam, the Mustagh Tower, Changabang, Choktoi and the unnamed spires of the Baltoro—which appear to be beyond the scope even of the most modern Alpine technique.

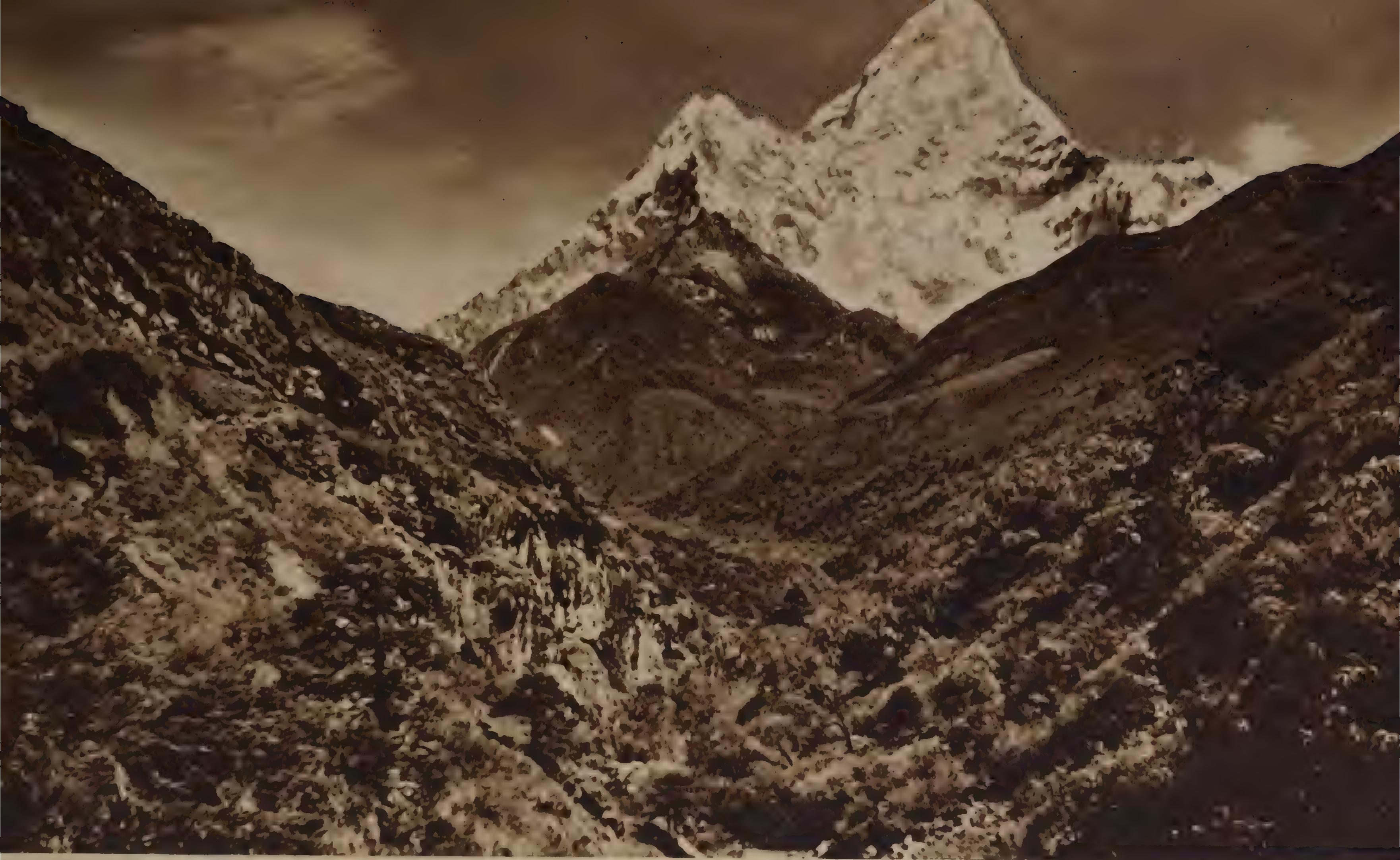
In the southern parts of the massif, around Everest for example, few peaks of less than 20,000 ft present any serious mountaineering problem. This is because the snow-line is so high that mountains below this height are not extensively glaciated. In the Karakoram, however, which lies between latitude 35° N and 36° 30′ N, the glaciation is very much more extensive and the vertical area of mountaineering difficulty is thus enormously extended. Very few peaks of the Karakoram, even down to the 18,000-ft level, have been climbed, and this is one of the chief reasons. Farther north still this factor is even more accentuated. Bogdo Ola for example, in the Eastern T'ien Shan, though little more than 18,000 ft high, resembles one of the great peaks of the Himalaya in form and structure. Here the glaciation is not much higher than Alpine level.

To what extent and in what way has the modern development of equipment increased the chances of success on Central Asian peaks? Apart from a general improvement in the quality of fabrics during or since the war, I can think of only three really important advances that have been made in this direction. The first is the development of oxygen apparatus. Before the war the oxygen apparatus available was so cumbersome and inefficient that it was never used seriously in the attempts to climb Everest during the thirties, and so far as I know was never used at all on any other mountain. This year, on the other hand, the whole plan for the attempt on Everest was based on the use of oxygen at high altitudes, and the new apparatus was so efficient that it was undoubtedly, apart from the weather, the prime factor in the success achieved. Nevertheless, though the use of the modern oxygen apparatus would enormously increase the chances of climbing such mountains as K2 and Kanchenjunga, I doubt if it has much general application in Himalayan climbing.



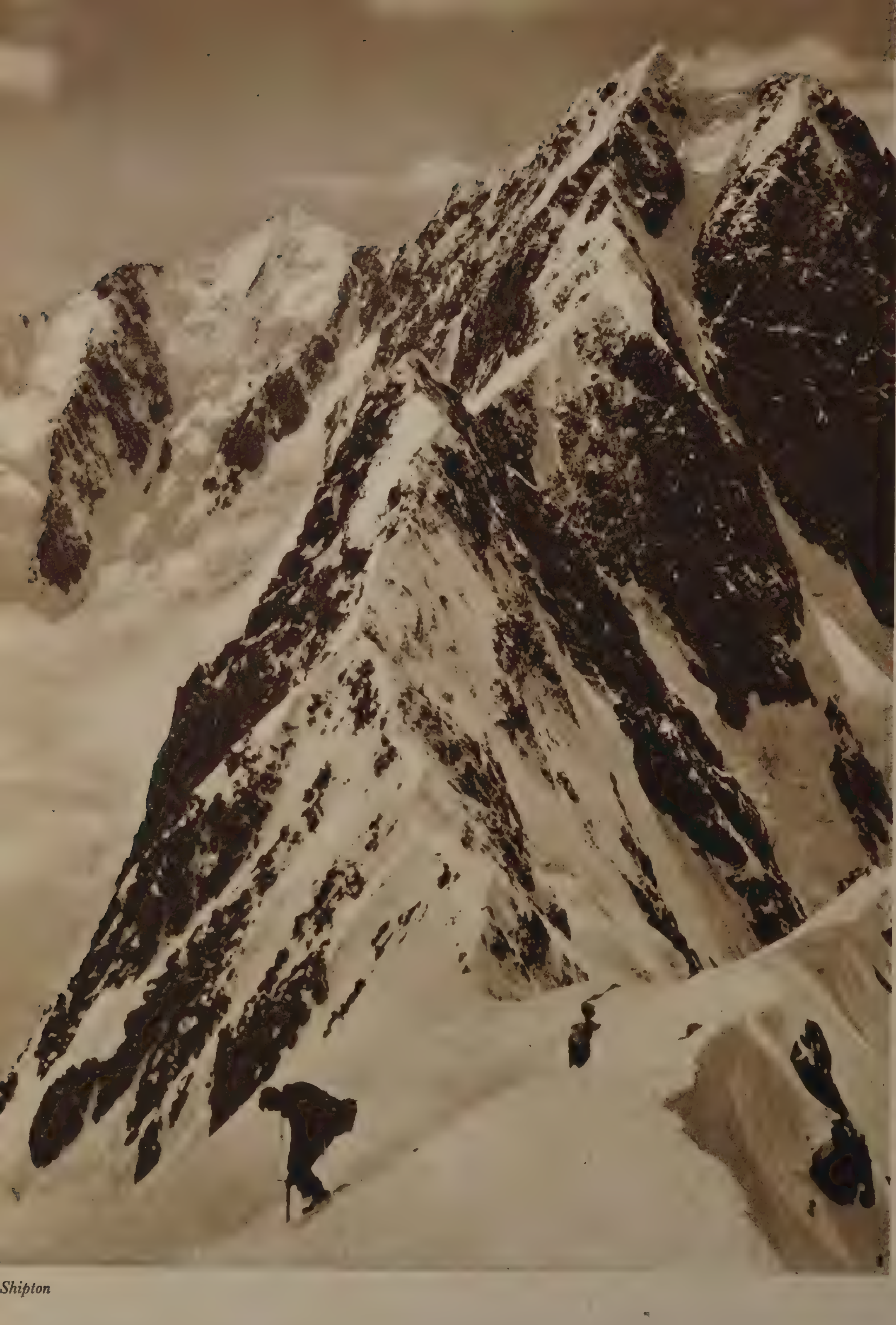
Eric Shipton

K2. 28,250 ft. It is situated on the main continental watershed, in the centre of the Karakoram Range, near the undemarcated frontier between Kashmir and Sinkiang



Himalayan Committee

(Opposite) *Kanchenjunga. 28,150 ft. In the Himalaya, eighty miles to the east of Everest on the border between Sikkim and Nepal.*
(Above) *Ama Dablam. About 22,600 ft. Seen from near Thyangboche, some fourteen miles from Everest, on the southern approach route*



Shipton

(Above) *Bogdo Ola. About 18,500 ft. In the eastern T'ien Shan not far from Urumchi, capital of the Chinese province of Sinkiang in Central Asia.* (Opposite) *An unnamed and unmeasured peak (probably about 21,000 ft) above the Trango Glacier, a tributary of the Baltoro Glacier in the Karakoram*

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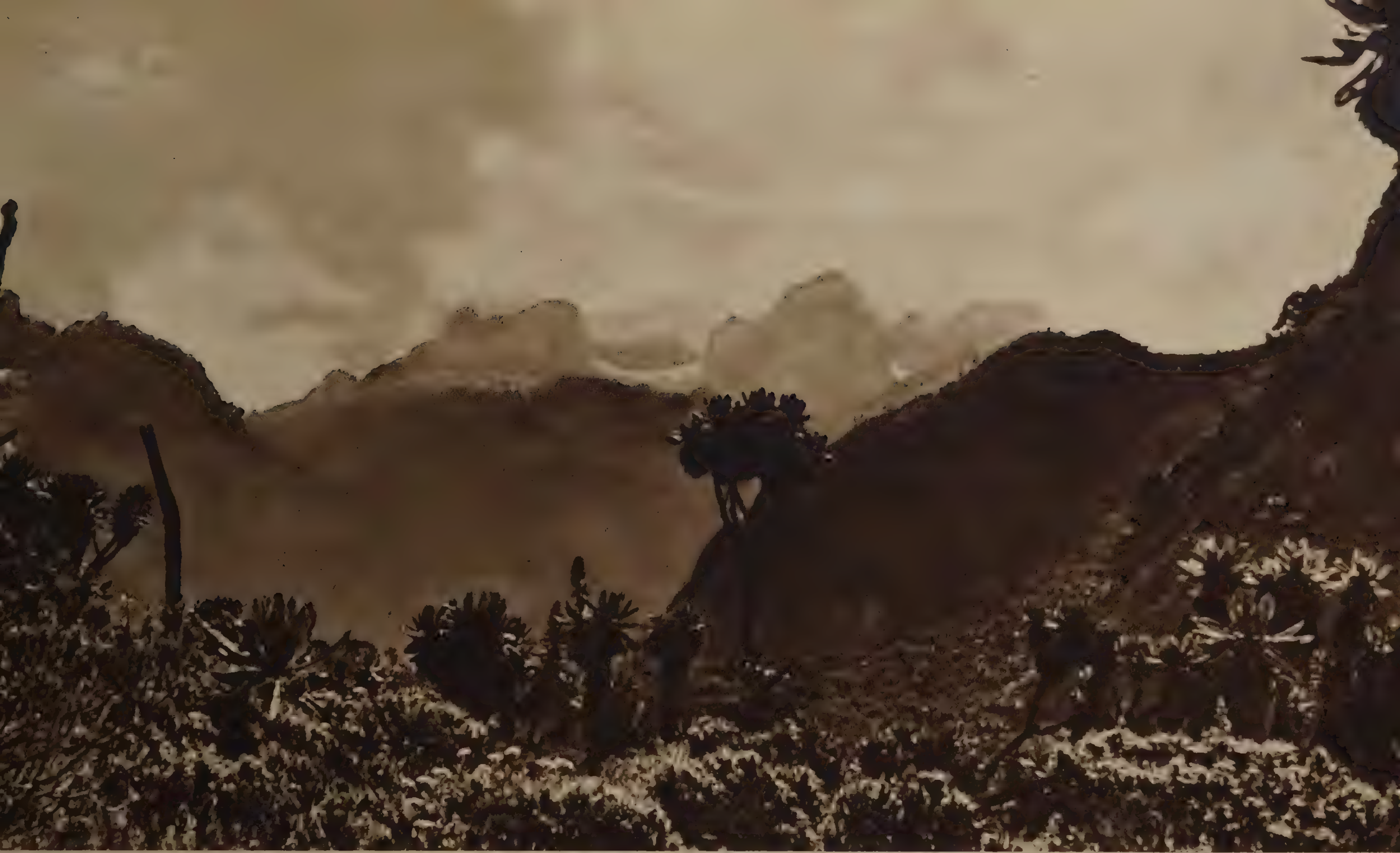
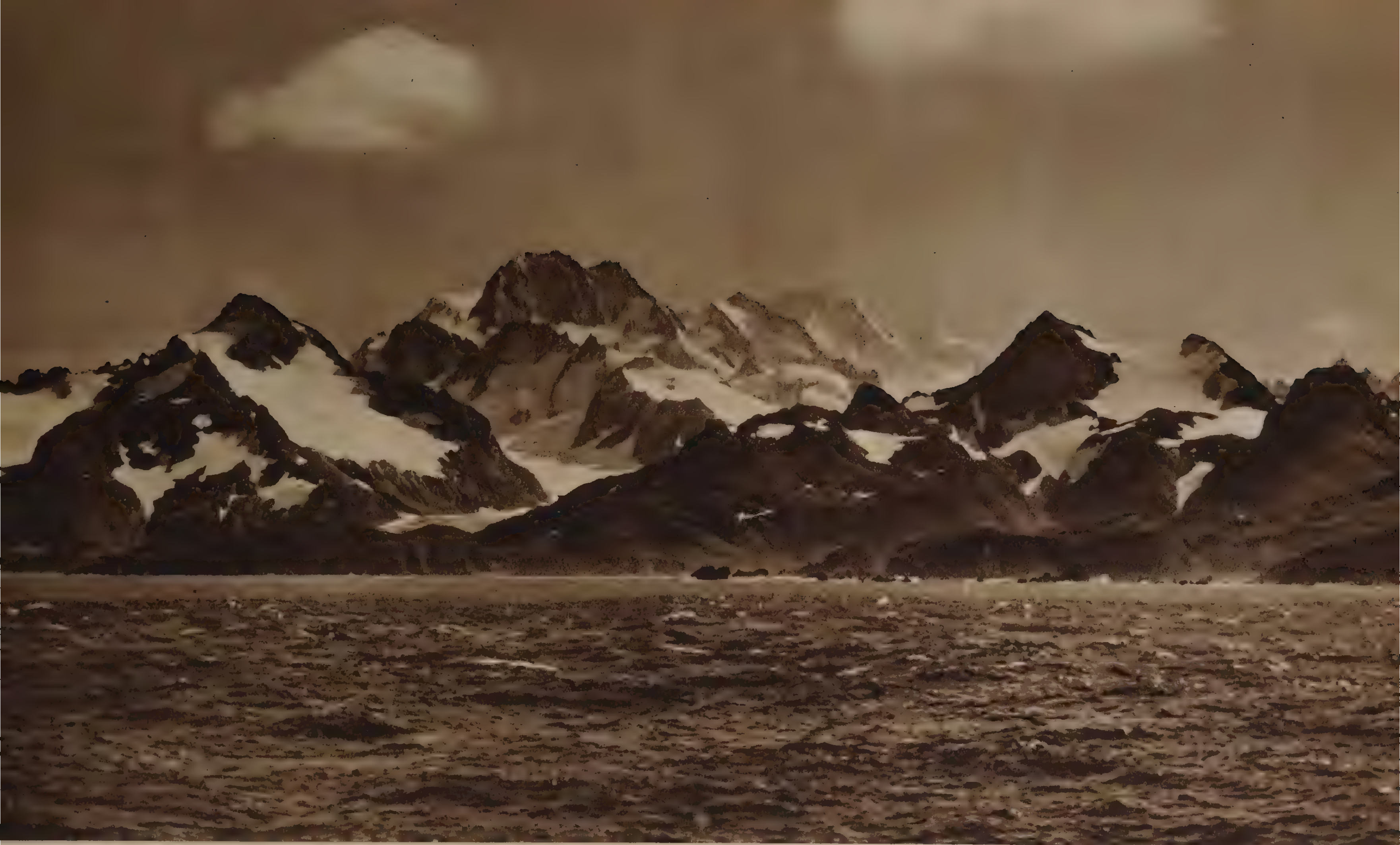


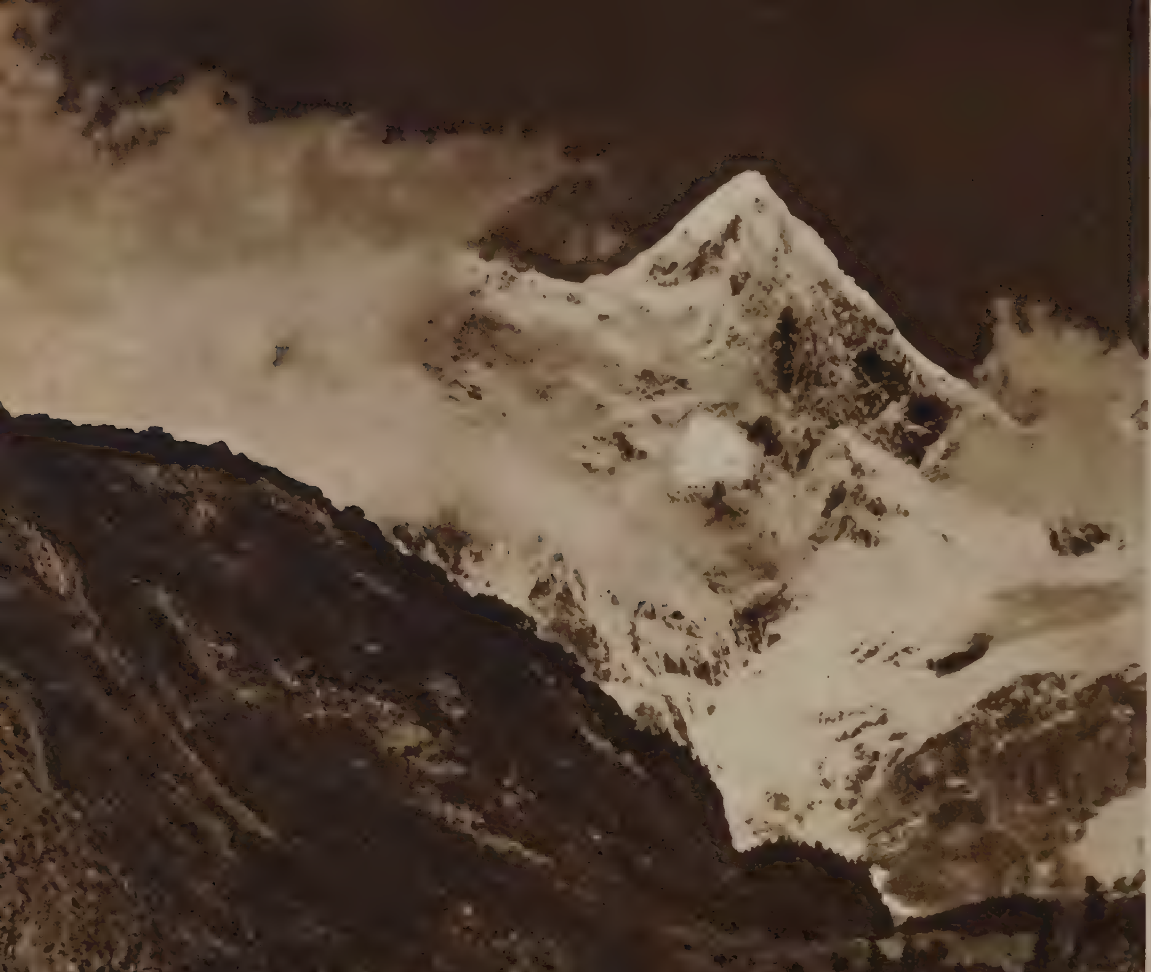
British Ruwenzori Expedition

The Scott-Elliott Pass and the eastern peaks of Mount Stanley (about 16,400 and 16,350 feet) in the Ruwenzori Range in Central Africa



Duncan Carse

Peaks in an unnamed range near the southern end of South Georgia, one of the Falkland Islands Dependencies, rising to over 5000 feet



ajor G. Sherriff

Namcha Barwa. 25,445 ft. On the border between Tibet and Assam, at the point where the Tsangpo (Brahmaputra) makes its great southerly bend

In the first place the supply of oxygen apparatus on a sufficient scale is so expensive that most expeditions would not be able to afford it; and secondly I would say, from my experience of climbing at extreme altitudes, that it would not be worth using on peaks of, say, 26,000 ft and less.

The significance of the revolutionary development in high-altitude footwear is also somewhat limited, but the use of down clothing, which has gone so far towards solving the problem of survival in extreme cold while at the same time reducing weight, has a very much wider application.

The advance of climbing technique has been, as one would expect, very much slower in the Himalaya than it has been in the Alps, and so far there is little evidence that there have been any considerable strides made in the post-war era. This is largely because few of the more expert Alpine climbers have visited the Himalaya often enough to adapt themselves and adjust their methods to a new and intimidating environment. Also, it must be remembered, Himalayan climbing is still in the stage when mountaineers are attracted to a peak because it can obviously be climbed rather than because of its apparent inaccessibility.

The attempts to climb Everest, and particularly those which have taken place since the war, have done a very great deal to focus interest upon the Himalaya. It is interesting to speculate upon the form that Himalayan mountaineering will take now that Everest has been climbed. There are several conflicting possibilities and there is not space enough here to discuss them all. I will confine myself to one line of argument which I hope is not founded on wishful thinking alone.

With less international competition and consequently less publicity, it will become much more difficult to raise the huge sums of money required to launch the large, elaborately equipped expeditions which came into vogue some thirty years ago. Thus this type of expedition will tend to diminish and in time, I hope, may vanish altogether.

Mountaineers wishing to climb and explore in Central Asia will be forced to do so on their own initiative, and on modest resources; and they will discover how incredibly small these resources can be while still providing all their needs. To raise funds they may be forced to undertake scientific observation in the regions they visit; then they will learn to their delight how little is really known of these vast regions. Above all they will find in the simplicity of their approach the true enjoyment of their endeavour.

How often during the past thirty years has one heard people say: "It will be sad when Everest is climbed, because its unclimbed summit represents the last geographical or mountaineering challenge left in the world"? No explorer, I imagine, would agree with this statement: to the mountaineer it is nonsense. I doubt if, after a century and a half of mountaineering, as many as one-tenth of the mountains in the world have yet been climbed.

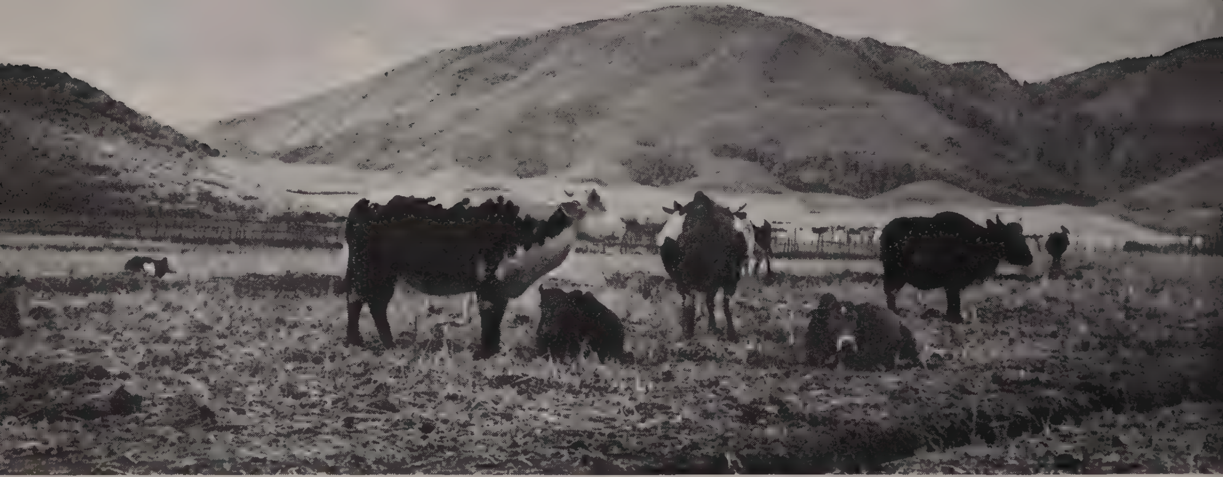
Any mountaineer in search of new fields of adventure cannot fail to be enchanted by the prospect opening before him. Some of the most enticing regions are perhaps far afield and difficult of access; they may demand new techniques and ingenious methods of travel; but when did such considerations deter men of initiative and determination, men with the imagination to break away from the conventional approach?

The choice is as varied as it is extensive. Is it the austere grandeur of mountains that attracts you? There could hardly be a better place to seek it than among the remote, storm-swept ranges of South Georgia across which Shackleton made his way on the last stage of his epic journey from Elephant Island. Some of them have been explored since, but the peaks are quite untouched. Have you a taste for strange mountain forms? I have an idea that you will find them in some of the unexplored regions of the Southern Andes of Patagonia. Here fantastic peaks have been seen to rise above the great ice-caps which send their glaciers right down into the waters of the huge fjords of the Pacific coast. Are you intrigued by snow mountains which hide their mysteries in the heart of vast forests of exotic tropical vegetation? Less than a year ago new peaks were found and climbed in Ruwenzori; the highest peaks of New Guinea still await the attention of an enterprising mountain explorer.

Having become acquainted with some of the ranges of Central Asia I formed a habit which was hard to break, and left little time for travel elsewhere. Each expedition, however successful in the achievement of its main purpose, left behind it a ragged fringe of unsatisfied curiosity which formed the nucleus of some new and often more ambitious venture. Thus as my Central Asian horizon expanded, so dreams of other lands receded. I have sometimes regretted this, but it is difficult to know at which precise point I could have made the break. At least it has given me some insight into the enormous scope for mountain adventure in this particular area.

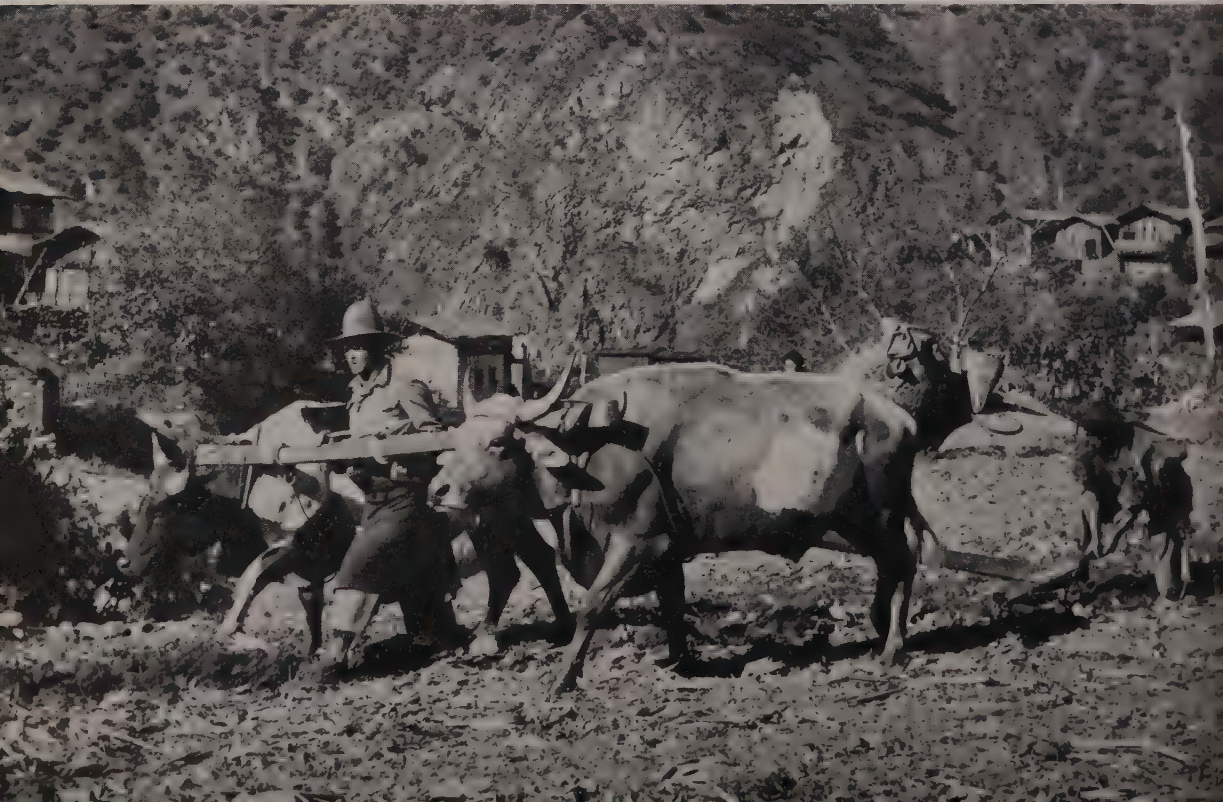
The Mithans of Assam

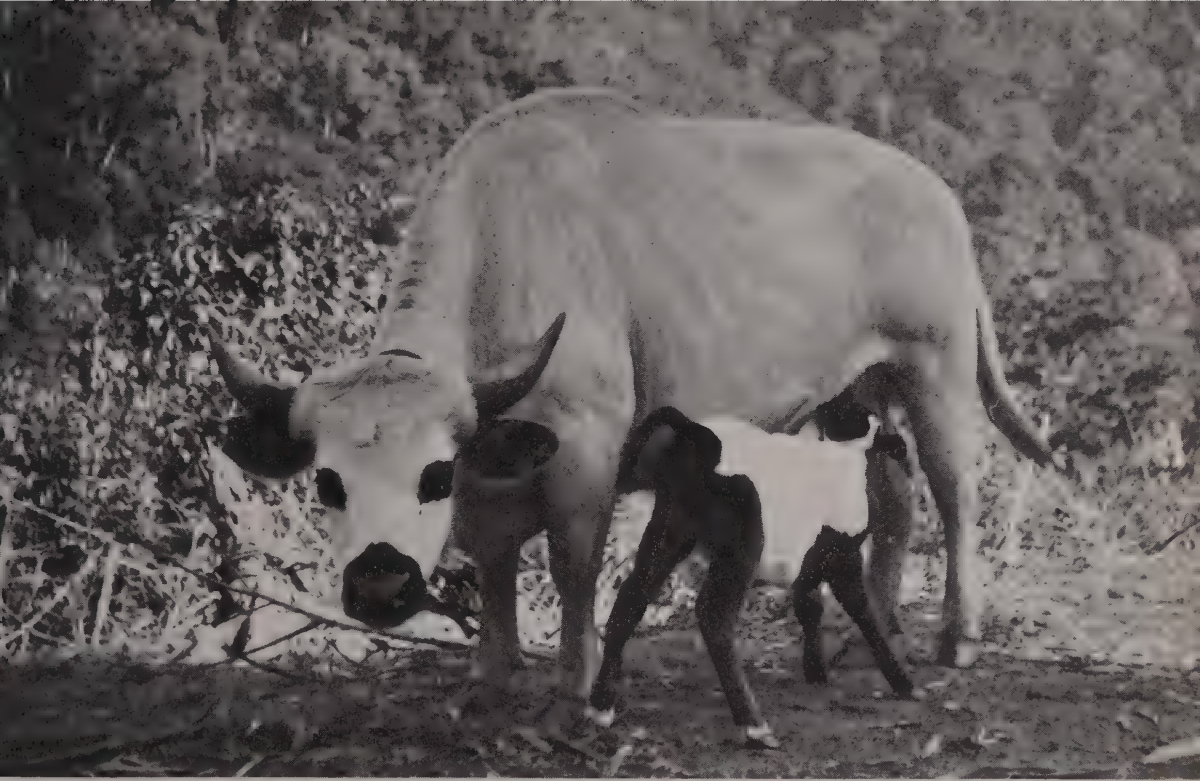
by C. R. STONOR

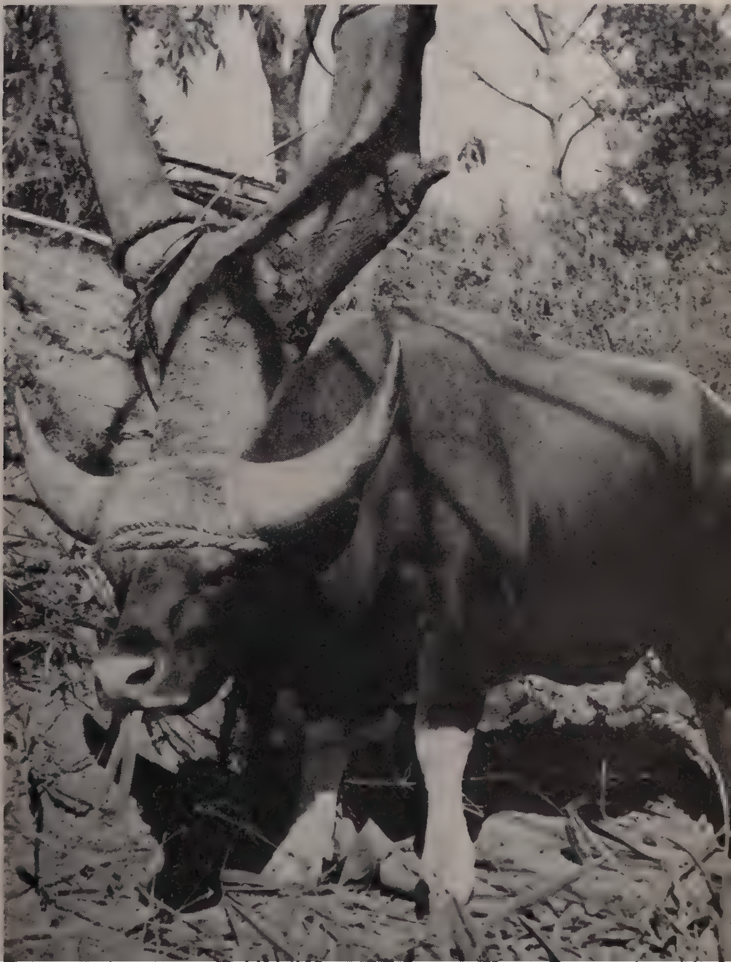


photographs by the author

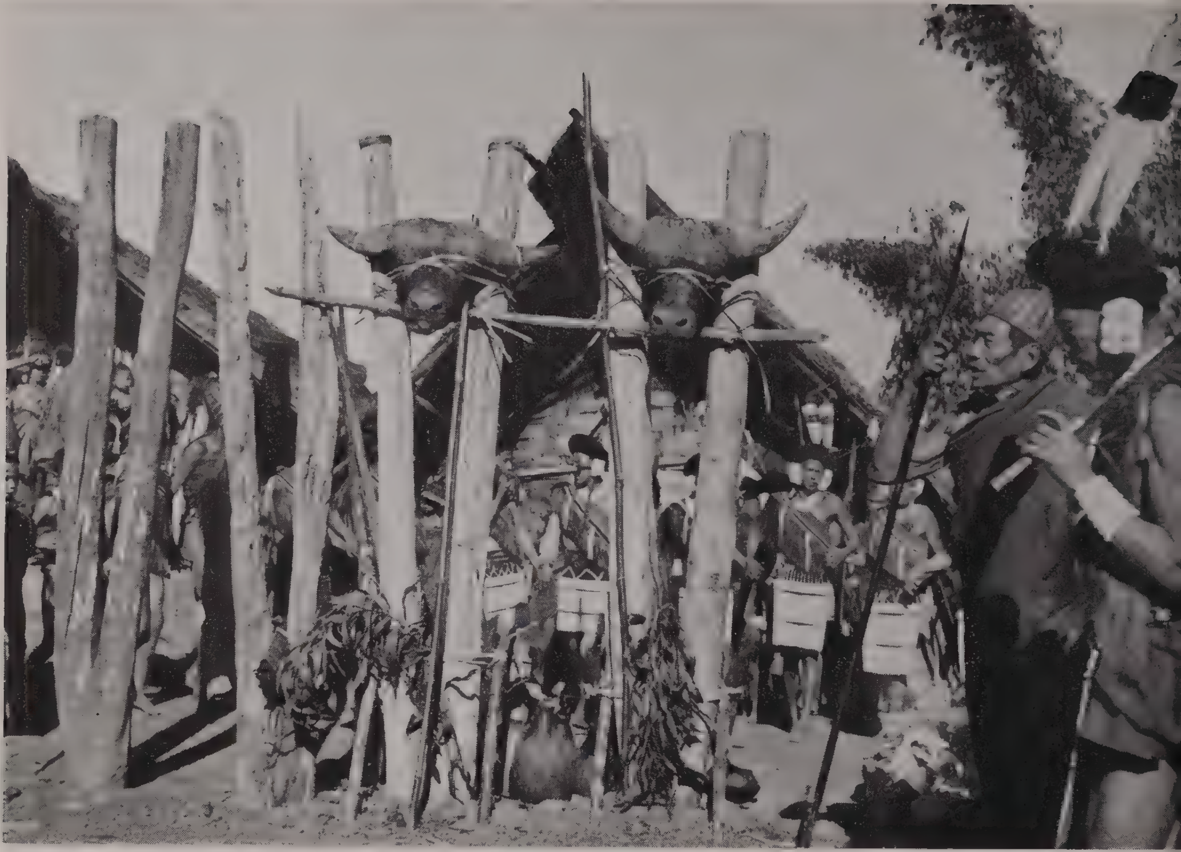
In the Assam Himalayas and on the hills of the India-Burma frontier the local tribes breed Mithans, a species of domestic animal found nowhere else, which they use for food, for sacrificial purposes and for trade. (Above) *Mithans and Zebu cattle grazing in the Apa Tani country in the Assam Himalayas.* (Below) *Ploughing with a cross between Mithans and Zebus on the Bhutan border where the climate is too cold and dry for pure-bred Mithans. The hybrid, docile and strong, is also adaptable to climate*

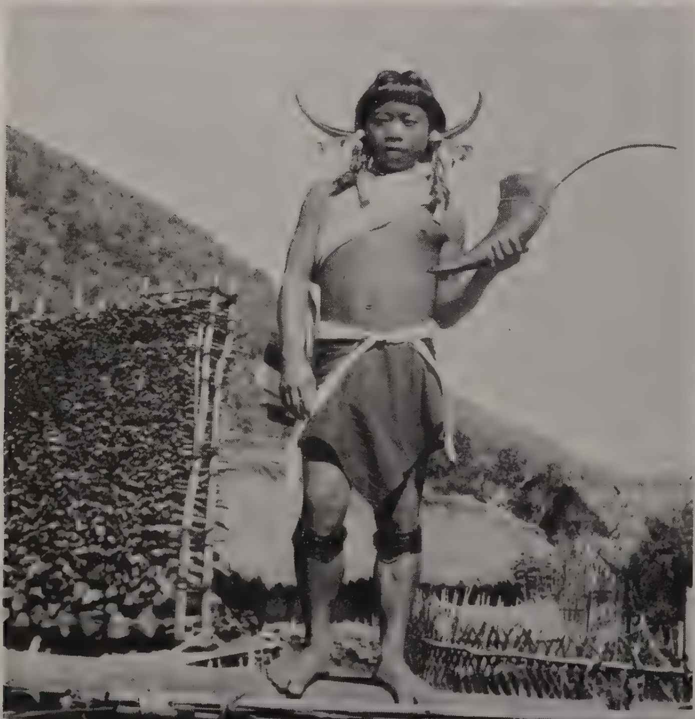




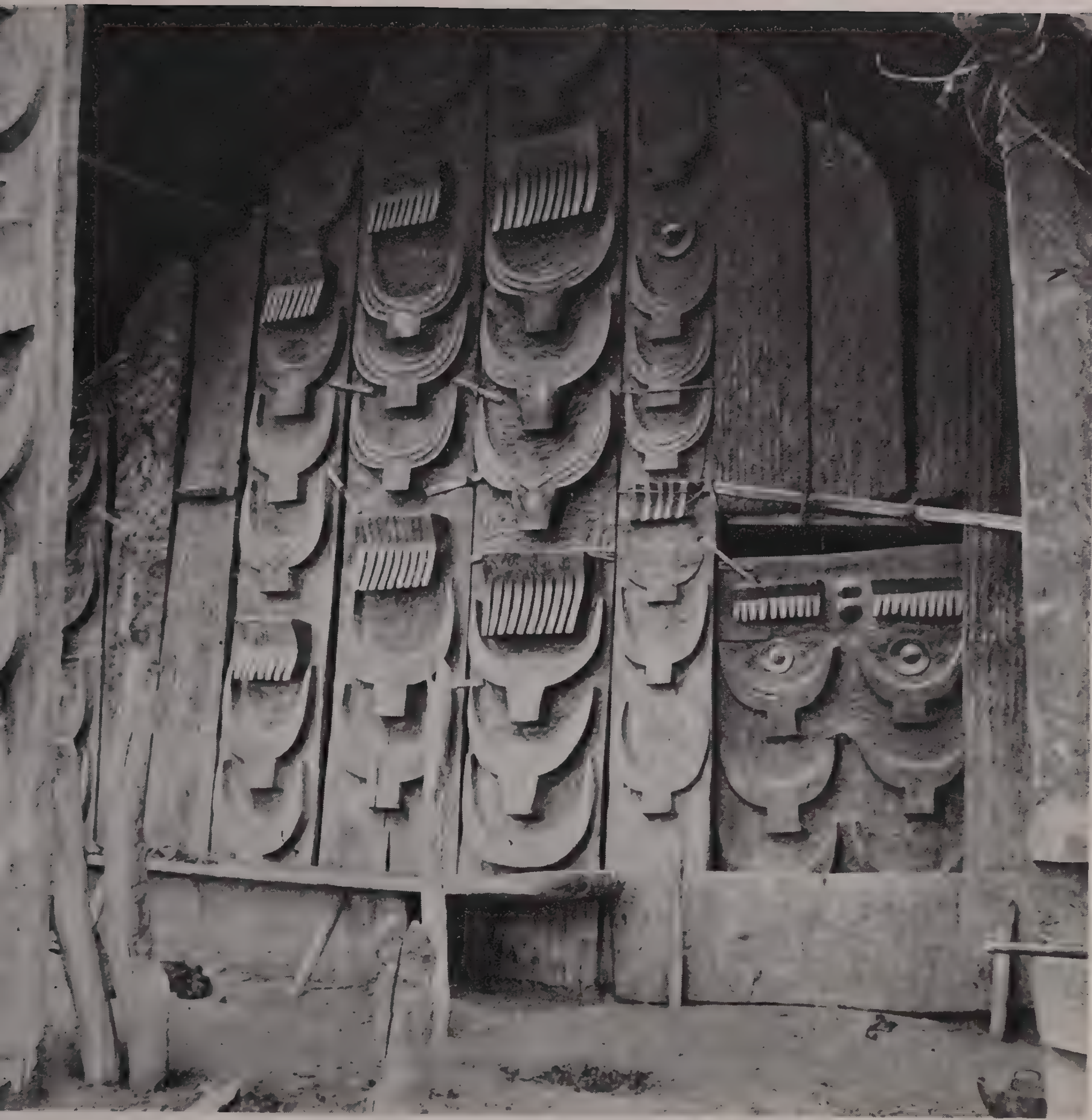


bove) *A pied Mithan cow with her calf.*
ght) *An exceptionally fine bull in a Naga*
age. It has a superb head, white stock-
s and the slate-and-white colour of its
bosed ancestor, the Gaur. The zoological
sification of Mithans is something of a
zle, but it is likely that they have been
d from Gaurs, which are among the best-
wn big-game animals of the sub-continent.
like Gaurs, Mithans are very tame, their
k is greater, they have larger dewlaps
their horns spread outwards whereas
e of Gaurs curve inwards over the forehead





The magnificent outward-sweeping horns o Mithans spring from a bony boss in the fore-head. They play an important part in th ritual of sacrifices among the tribes o Assam. Prestige depends not so much upo the size of the animal sacrificed as on th girth and span of the horns, which are late placed on the walls of the sacrificer's hous as a tally and as a sign of wealth. It i believed that each beast killed is waitin to establish a man's position after death After the sacrifice, the meat is distribute to the officiating priests and to relative according to rule so that all get a share (Above) *The heads of sacrificed animals ar tied to posts while Naga warriors chant an dance around them in full ceremonial dress* (Left) *A brave of the Nzemi Nagas using horn as a drinking cup for his rice bee*



The heads of Mithans are the subject of a simple form of art practised by several tribes, who carve horns on the gates of villages and on house-fronts, particularly those of the richer men who have performed many sacrifices, and who qualify by tribal custom to ornament their houses thus. The Nagas keep only a few Mithans owing to their increasing population and the consequent lack of space for grazing, but among the remoter peoples of the Himalayas, notably the Daflas, they are kept in greater numbers and a rich man may have up to 1500 head—a sign of wealth and social prestige. By present-day values a bull may be worth as much as £50

Geography and the News

by FRANCIS WILLIAMS, C.B.E.

Among other valuable functions of Geography is that of correcting general impressions which are seen to be erroneous when subjected to its factual tests. How great, in different parts of the world, is the power of the Press? By whom is world news collected and how is it distributed? What geographical factors influence its reception and use? These questions are comprehensively examined, we believe for the first time, by the former Editor of the Daily Herald *and Controller of News and Censorship at the Ministry of Information. Some of his answers are themselves news*

Every day close upon 225,000,000 newspapers are sold throughout the world.

Even taking into account the fact that the total world population is more than ten times that figure this is by no means an unimpressive number, particularly when one considers that according to normal newspaper experience every copy of a newspaper sold is likely to be read on an average by three or four people. Indeed in some areas where newspapers, being scarce and valuable commodities, are passed from hand to hand or read aloud to a group of listeners the number of readers per copy is much higher.

On such a showing it would seem that the importance of the Press as a medium of mass information can hardly be exaggerated.

But this figure is, of course, an overall one. And, as is often the case with overall figures, it tends to get less impressive when more closely examined. In reality it represents, as Diagrams I and II show, a high concentration of newspaper readership in comparatively few of the more developed and literate areas of the world, counterbalanced by a tiny or completely non-existent newspaper circulation in other areas covering a large part of the earth's surface and inhabited by many hundreds of millions of people.

Newspapers are of greatest importance as a medium of mass information in the United Kingdom, in most, although not all, of Western Europe, in North America, in the nations of the British Commonwealth outside Asia and Africa and in Japan. Nor is their importance much less in the U.S.S.R. and in some, although not all, of its satellites. But throughout the greater part of Asia and Africa the part played by the Press in this or any other respect is wholly insignificant. And it is not much more important anywhere in South America outside Argentina, Brazil and Uruguay.

Moreover even in the areas of high newspaper circulation there are startling differences in the extent of newspaper readership, as Diagram III indicates.

Europe is above all others the continent of newspaper readers as is only natural in view of its political and cultural maturity and long history of trading development. But although 596 newspapers are sold daily to every thousand inhabitants of the United Kingdom—the highest figure of newspaper readership in the world—the figure for Portugal is less than a tenth of this : 58 per thousand. Norwegians read more than eight times as many newspapers per thousand population as the Spaniards; the Italians only about a fifth of those read by the citizens of Luxembourg and less than half the number read by Icelanders. The French, who are in so many ways the most literate of the European nations, read only about half as many newspapers as do the English and fewer even than the Finns.

But although the extent of newspaper readership varies to a quite surprising degree even among European countries, the divergence between the least newspaper-conscious of such states and the majority of those in Asia, Africa, and to an only somewhat smaller extent South America is even more startling.

Portugal, as already mentioned, reads only one-tenth as many newspapers per thousand population as Britain but it reads ten times as many per thousand as India, and nearly thirty times as many as Pakistan where only two newspapers are sold for every thousand people. Italy with a newspaper circulation of only 98 per thousand inhabitants is startlingly low by most European standards. But in Tanganyika the comparable figure is only 0·5 per thousand and in French West Africa it is only 0·1.

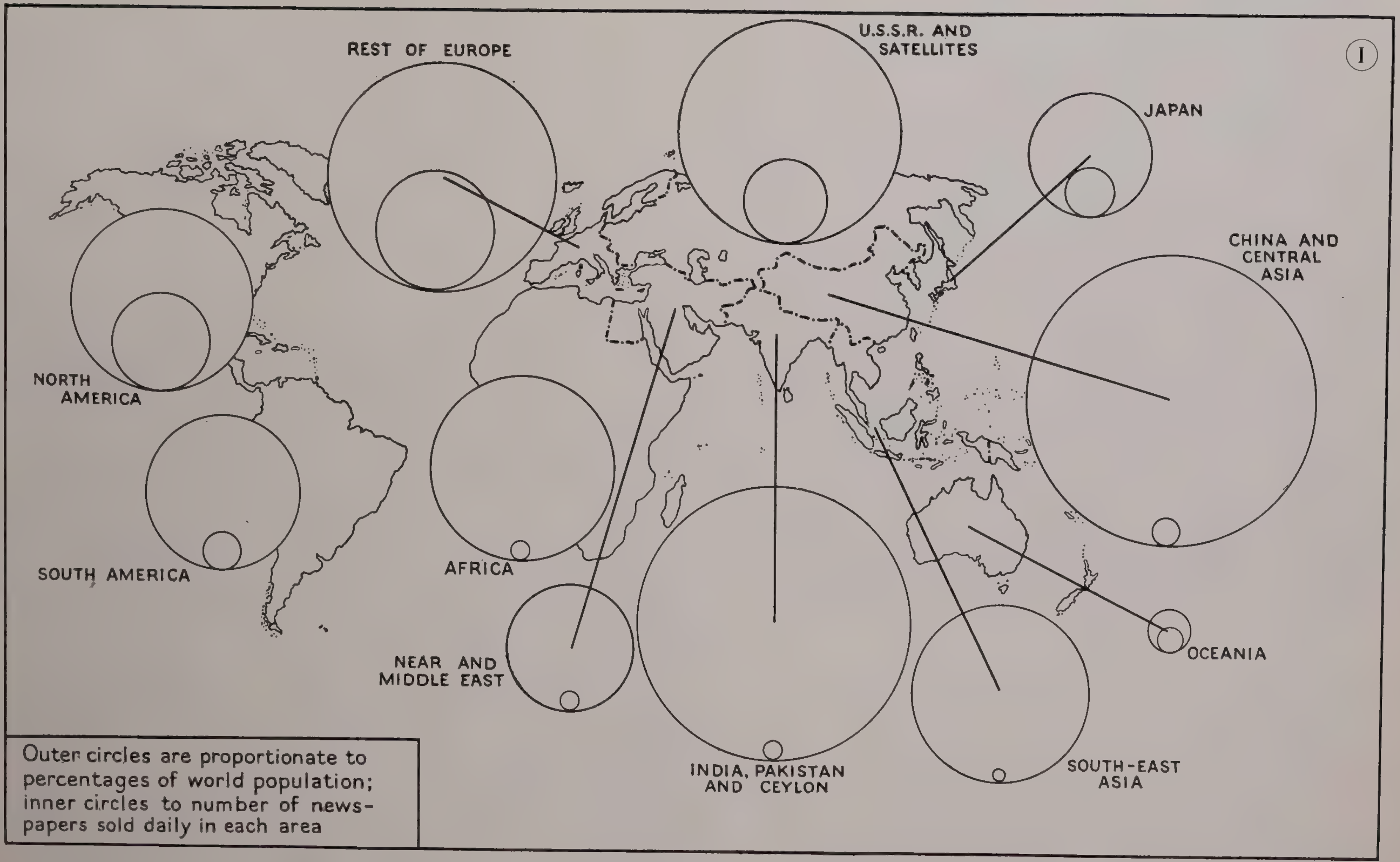
On the American continent the 354 newspapers per thousand inhabitants circulated in the United States compare with a mere 14 per thousand in Bolivia and only 6 per thousand in Haiti. In the Middle East Israel reads 235 newspapers for every thousand inhabitants, Egypt only 17, Persia only 5.

Whether one is considering the Press as an

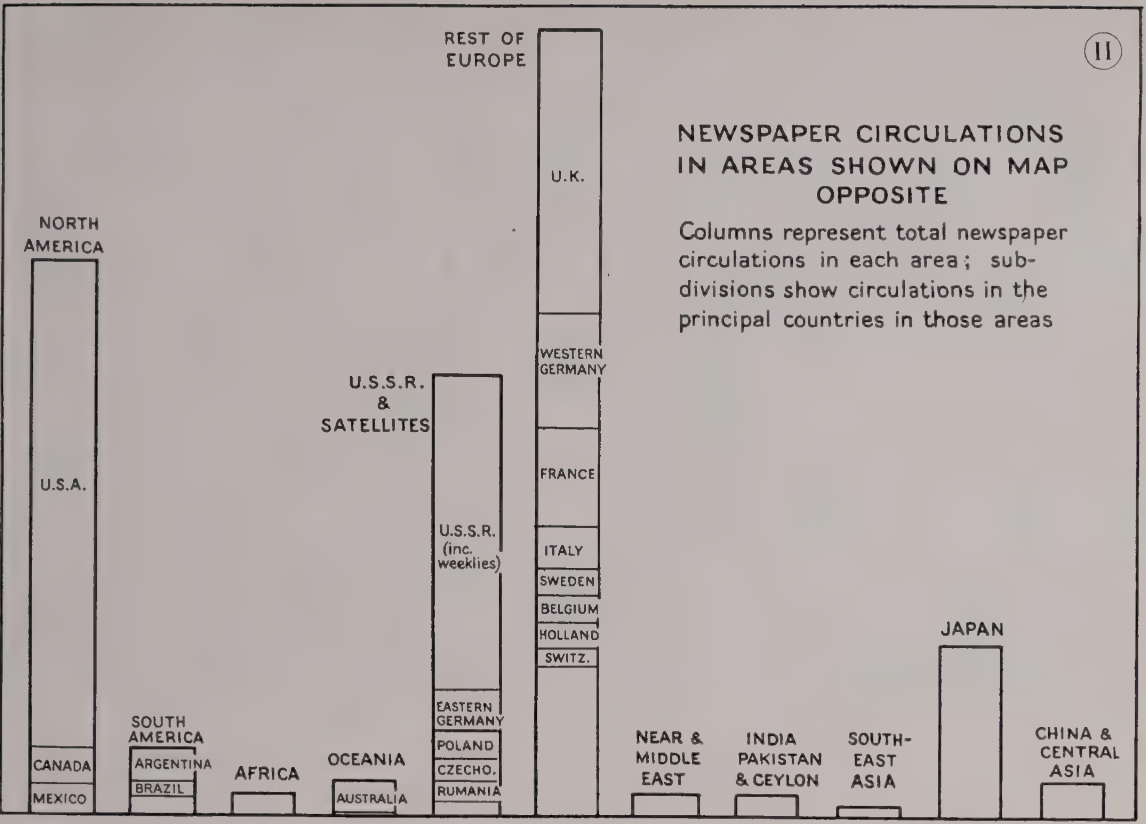
Agentur Hecht, from B.I.P.S.

Horace Bristol Jnr, from Camera Press

Newspaper readership in various parts of the world is not to be estimated only in terms of the total number of copies sold or even the number sold per thousand inhabitants. It depends also on the size of the newspapers available and the number of people who read each copy. The Japanese are keen newspaper readers but a single copy of one of the newspapers at the disposal of an American reader (above) *may contain more pages than a dozen copies of those that* (left) *must each suffice for many pairs of Japanese eyes*

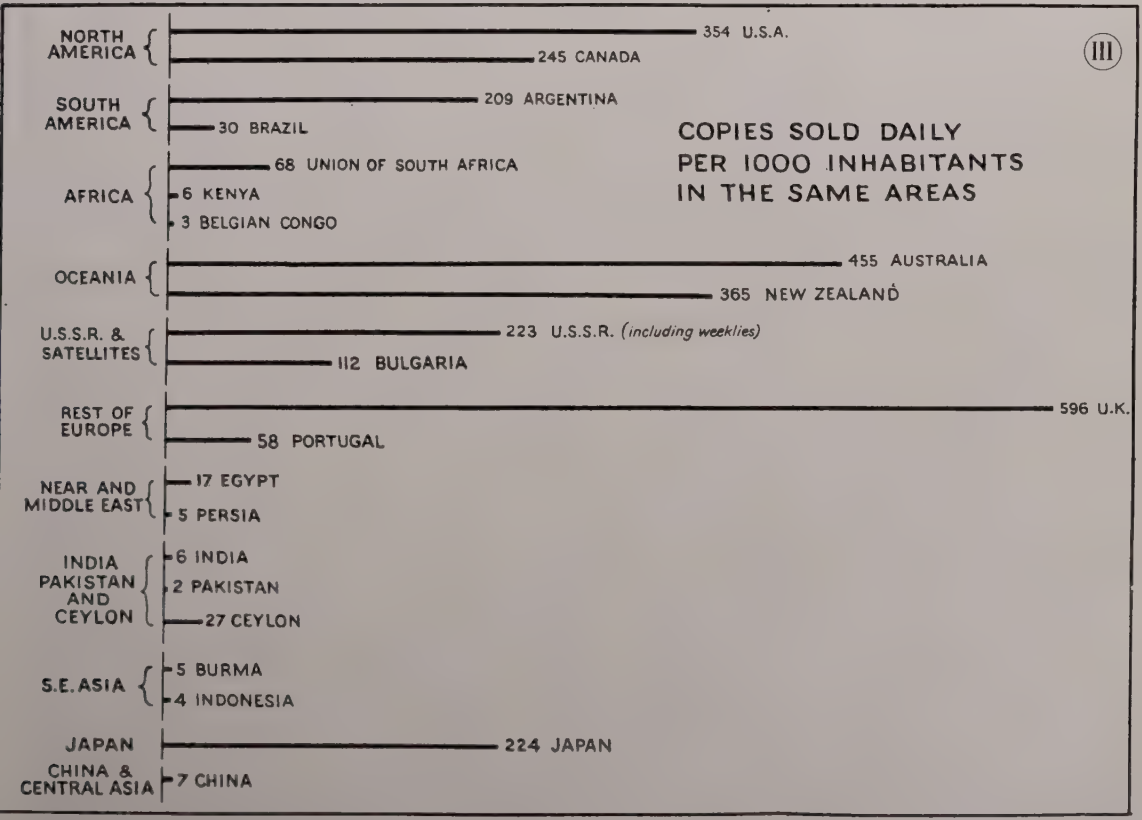

I
REST OF EUROPE
U.S.S.R. AND SATELLITES
JAPAN
CHINA AND CENTRAL ASIA
NORTH AMERICA
SOUTH AMERICA
AFRICA
NEAR AND MIDDLE EAST
INDIA, PAKISTAN AND CEYLON
SOUTH-EAST ASIA
OCEANIA
Outer circles are proportionate to percentages of world population; inner circles to number of newspapers sold daily in each area

K. C. Jordan



NEWSPAPER CIRCULATIONS IN AREAS SHOWN ON MAP OPPOSITE

Columns represent total newspaper circulations in each area; subdivisions show circulations in the principal countries in those areas



COPIES SOLD DAILY PER 1000 INHABITANTS IN THE SAME AREAS

K. C. Jordan

Van Schagen, from B.I.P.S.

News has different qualities for different recipients, by whom newspapers may be read with such contrasting emotions as contempt or judicious appraisal. These are reflected in the bearing of (above) *the crowds who bought newspapers in order to burn them when King Leopold's abdication was announced in Brussels; and* (below) *the priests who, in Rome, calmly await a Papal blessing*

Haas, from Camera Press

instrument of mass information and thus as an essential part of a democratic society or as a medium of trade advertising for the development of new markets, all generalizations about its influence are both useless and misleading unless these facts of the geographical distribution of newspapers are kept constantly in mind.

If newspapers do in fact serve an essential function in the practice of modern democracy then only a few countries are in a position fully to practise democracy. Nor if one wishes to make a point of view known among large populations are newspapers of any value for this purpose over a great part of the world. As for selling goods produced for mass consumption, the newspaper cannot help so far as the great majority of South Americans, Asians and Africans are concerned. The power of the Press is a very real power. But it is limited in area and in many parts of the world is to all intents and purposes nonexistent.

Nor is this unbalance in the newspaper map of the world less striking if one shifts the focus of one's vision and instead of looking at it in only terms of geographical areas considers it from the point of view of those parts of the world where, politically speaking, the need for an informed Press adequately distributed among large populations is currently most urgent.

Over the whole of the Near and Middle East—of all areas the one historically most fluid and unpredictable and the one in which the rivalries of the great powers jostle each other with the most dangerous persistence—far fewer newspapers are circulated than are sold daily in one small Scandinavian country, Sweden. Sweden reads 2,895,000 newspapers a day; the whole of the Near and Middle East less than 2,000,000.

If one turns one's eyes across the world to South-East Asia—to Burma, Indo-China, Indonesia and Malaya, all centres of actual or potential struggle between the philosophies of East and West—the situation is hardly more encouraging. Together these four, so much in the front line of the modern political and ideological struggle, have access to substantially less than half the number of newspapers read daily by the Swiss.

As for the great colonial areas of the world, rent by racial and nationalist stirrings of immense significance for the future, in most of them newspaper circulations are infinitesimal. In Kenya, for example, the number of newspapers sold per day is less than 30,000, not much more than one-sixtieth of the number read in Denmark with only a little more than four-fifths of Kenya's population. Yet with the exception of Algeria, French Morocco and Tunisia, Kenya enjoys the highest newspaper circulation of any of the African non-self-governing territories.

Newspapers, so potent as instruments of information and education in the great areas of metropolitan power and so much the centre of that long struggle for freedom of expression which has so large a share in the development of democracy, are thus in no position to play even the smallest part in determining the movement of events in some of the areas of greatest tension in the world.

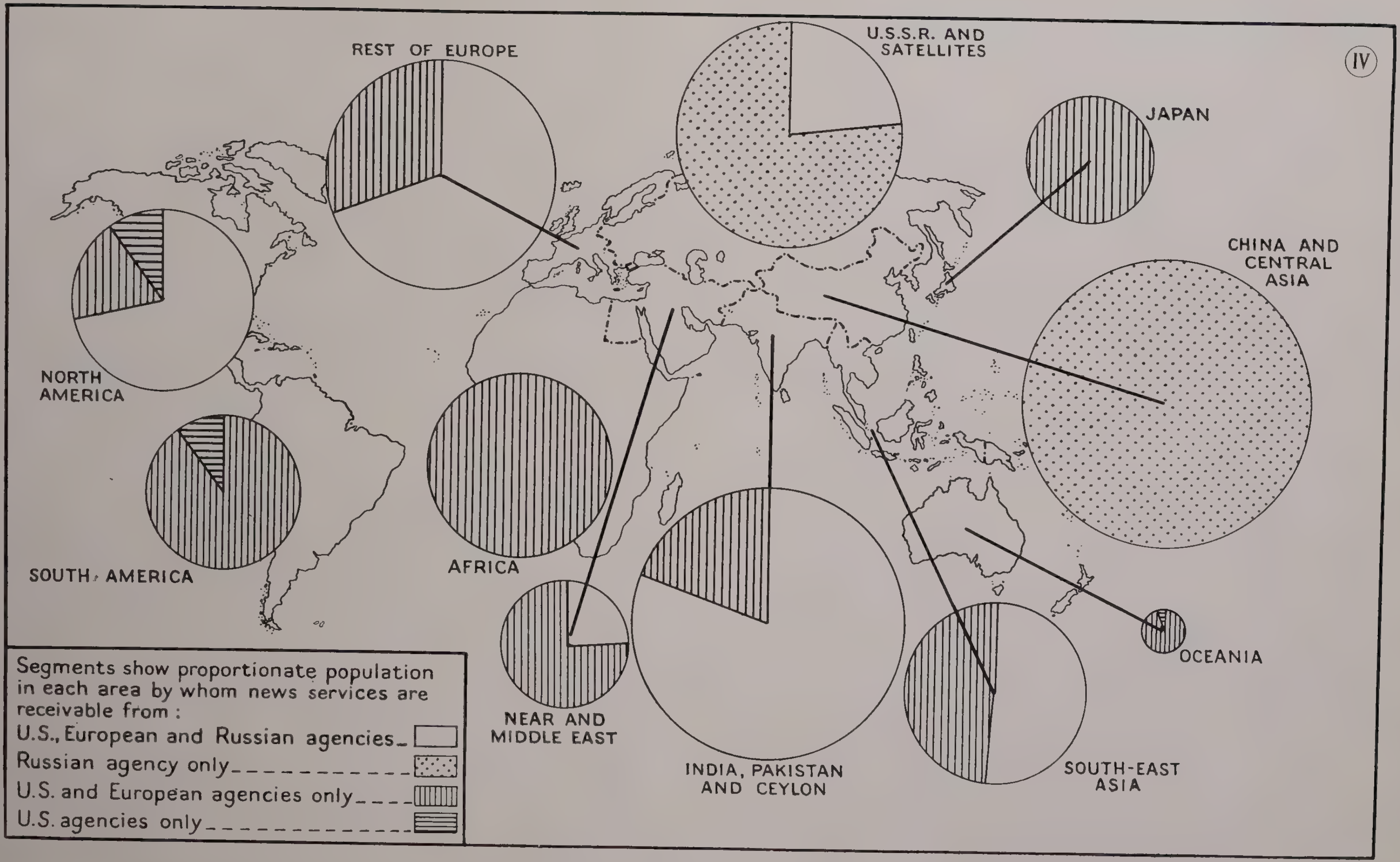
Yet theoretically, as Diagram IV shows, some service of world news flows to almost every part of the globe. Day and night, by cable and radio, news of international events large and small is carried across the oceans and continents to an extent never previously known in the history of the world, only to fail of penetration in vast areas because of the absence of newspapers to print it or readers literate enough to understand it.

But how objective and unbiased, in fact, it is proper to ask, is the flow of world news thus available to all countries which have the domestic newspaper facilities to make use of it?

Although the distribution of newspapers throughout the world varies enormously, the collection and distribution of world news is concentrated in remarkably few hands. The great metropolitan newspapers of Europe and the United States have of course their own correspondents in the principal news centres. Even these newspapers, however, depend to some extent for much of their basic news service upon the great world news agencies and the rest of the world's Press does so almost exclusively.

Although there are some seventy-five sizeable general news agencies in the world, all but six of them are primarily concerned with the collection and distribution of domestic news in their own national territories: only six act in any complete sense as international agencies transmitting world news across frontiers to newspapers of many nationalities.

The six world agencies are concentrated in four national groups. These groups are: British Commonwealth—Reuters which is now a cooperative enterprise owned jointly by the newspaper association of Britain, Australia, New Zealand and India; United States—Associated Press which is a cooperative enterprise owned by American newspapers, and the United Press and International News


IV
REST OF EUROPE
U.S.S.R. AND SATELLITES
JAPAN
CHINA AND CENTRAL ASIA
NORTH AMERICA
SOUTH AMERICA
AFRICA
NEAR AND MIDDLE EAST
INDIA, PAKISTAN AND CEYLON
SOUTH-EAST ASIA
OCEANIA
Segments show proportionate population in each area by whom news services are receivable from :
U.S., European and Russian agencies
Russian agency only
U.S. and European agencies only
U.S. agencies only

K. C. Jordan

Service both of which are privately owned; U.S.S.R.—Tass Agency which is state-owned; France—Agence France Presse which is a public company subsidized by the French Government which appoints its Director.

Between them these six agencies distribute news to some 144 states and territories with a combined population of just on 2,400,000,000. In principle, therefore, they may be said to cover the entire world; although in practice the absence of adequate internal communications in many large areas, and the mass illiteracy and lack of newspapers or even radio services in Asia, Africa and South America, means that there is no real method by which the news they provide can penetrate to the interior or effectively reach more than a small, comparatively advanced, section of the total population.

This fact has to be borne in mind in looking at the general picture of world news coverage given in Diagram IV.

In the United States, in most of Western Europe, in Canada, to some extent in South Africa and even in some degree in India—where the system was developed by Reuters in the days when it had a virtual monopoly there—news is distributed from the agencies to the newspapers primarily by means of teleprinter networks which link each newspaper client with the main news-distributing office of the news agency. This system has the great advantage of enabling a two-way service of news so that the agency can collect national news from the newspapers it serves, as well as send news from other countries to them. Moreover it enables a subscriber receiving an agency service to 'talk back' to the agency and thus make its needs plain and ask, if necessary, for further elucidation of a specific point in the news.

But such a system is only possible on a comprehensive scale in areas where there are highly developed telecommunication systems and it is very costly to operate. Elsewhere the agencies use to some extent the ordinary cable and radio services. But to a very much larger degree, particularly for serving clients in widely scattered areas, most of them now employ multiple address newscasts transmitted by radio. Under this system regular news services are beamed to a wide area where they can be picked up direct by newspaper subscribers by means of small office listening-sets or else monitored by the local telecommunications service for distribution to all the agency's clients in the area. Reuters, which has developed this system more than any other of the world agencies, now transmits its Globereuter service on seven beams. Each of these services goes out on a different wavelength and in a different direction and their combined spread is such that reception is possible in most of the world, with the exception of comparatively small areas in Central America and the Antipodes.

In the U.S.S.R. Tass transmits news very largely by radio; using, however, to a degree not employed elsewhere a system of voicecasts which enable news to be taken down at dictation speed by small papers with no mechanical facilities for receiving and transcribing Morse or other signals.

At first sight the concentration of world news distribution in a few powerful hands has manifest dangers, particularly as in practice three out of the six world agencies mentioned —Reuters, Associated Press and United Press —control much the largest part of the world traffic in news outside of the U.S.S.R. and its satellites.

But in fact the danger that news may be 'angled' to serve particular interests which might in theory seem to exist is largely offset by other factors. Apart from Tass none of the world agencies enjoys a monopoly in any important area, although there are some parts of South America which receive their outside news only from the three United States Agencies and Agence France Presse is the only provider of world news to some of the French overseas territories.

But, as Diagram IV shows, news is available to nearly 38 per cent of the world's population, including all those areas where newspaper reading is most highly developed, from all the six main world agencies. Another 32·6 per cent receives news from all except Tass.

Only in the Soviet group is there complete monopoly, for the U.S.S.R. itself is closed to all agencies except Tass and so is China. Some of the satellites—notably Czechoslovakia, Poland and Hungary—still, however, receive news from other agencies either directly or through exchange agreements, although they rarely use it to any very great extent.

In the areas outside the U.S.S.R. and its satellites served by the Western agencies one other factor besides that of competition between individual agencies enters into the picture. All these agencies are serving many hundreds of newspaper subscribers of different races, nationalities and political, social and religious opinions. In very many cases they are sending to each of them the same basic news coverage. By the nature of their business and the diversity of their subscribers the

By courtesy of H.M. Postmaster-General

Anglo-American leadership in world news reporting is due partly to the control of radio and cable communications. Much news goes out by radiotelegraph or radiotelephone, long-wave or short-wave. (Above) *The short-wave transmission line gantry at Rugby, the largest radio centre in Britain*

world news agencies are therefore forced to aim at as high a degree of objectivity in news-reporting as is humanly possible; otherwise they would meet a flood of complaints from clients of many differing viewpoints. Moreover the two largest agencies in the international field, Reuters and the Associated Press of America, are cooperatively owned by their major subscribers—and in Reuters' case by subscribers in four different countries—who are thus in a particularly strong position to object to anything they regard as a departure from the principle of impartiality in basic news-reporting.

On the other hand it has to be taken into account that the primary voice in a news agency's policy, and particularly the determining factor in its choice of what news is most important, is bound to be affected by the needs of its major subscribers. And although the days of the exclusive news empires of the first Baron Reuter and his German and French rivals, Wolff of Berlin and Havas of Paris, have long since passed, each of the major agencies has areas of particular importance to it whose needs inevitably affect in some degree its general world service.

Broadly speaking, and despite the availability of other services, the North and South American Continents are predominantly the territory of the three American agencies. The Commonwealth, Asia (outside of China) and the Middle East depend most upon Reuters; and Agence France Presse is largely, although not entirely, concentrated on the French overseas territories and a few parts of Latin America where it has inherited the goodwill built up by its French predecessor Havas. Western Europe is common ground for all the agencies and is sufficiently important to all of them to be sure of an adequate and impartial service.

Territories outside these areas may, however, well feel that they are being served by agencies whose main interest lies elsewhere and who, with the best will in the world, are neither very much interested in, nor wholly understand, their needs and problems.

The Anglo-American dominance in the field of international news outside the Soviet group naturally enough also creates some political anxiety in countries anxious to assert their independence in this as in other respects. This anxiety lies in part behind the decision of the French Government to subsidize Agence France Presse, which without such a subsidy would be in no position at present to compete even to the comparatively small extent it does with the American and Commonwealth giants. Other countries lacking the financial resources of France and the strong domestic newspaper industry upon which Agence France Presse can rely have the same anxieties without the same ability to meet them—nor can government-subsidized news agencies be regarded in any event as a desirable solution to the problem.

What other solution, if any, is there? The Anglo-American predominance in the field of world news reporting is not accidental. It rests partly on the firm base for international operation provided in each instance by a highly mature and financially prosperous domestic newspaper industry which can afford to support a strong agency, and partly upon the historical fact of Anglo-American leadership in the control of international communications.

So far as Britain is concerned this leadership finds its expression in the Cable and Wireless system of 155,000 nautical miles of submarine cables spanning the Atlantic Ocean, the Pacific Ocean, the Indian Ocean, the Mediterranean and the Red Sea and in a radio network controlled by the Commonwealth Telecommunications Board of 152 international radiotelegraph channels and 136 international radiotelephone channels. In the United States it rests on the control of some 76,000 miles of international cable, 152

Between them, Britain and the United States control over 230,000 nautical miles of international submarine cables, which are serviced by such craft as (below) *the* Stanley Angwin *of Cable and Wireless. She has a range of 10,000 miles; carries a crew of 114 and 400 miles of deep-sea cable*

By courtesy of Cable & Wireless Ltd

international radiotelegraph channels and 54 international radiotelephone channels. No other nation or group of nations approaches anything like these totals.

The value of news depends on the ability to collect and distribute it efficiently and quickly. It is historically inevitable therefore that the greatest services of world news should be concentrated in the hands of those groups that control most of the means of transmitting it.

Moreover the business of collecting and distributing news on an international scale has become so costly—depending as it does on the ability to maintain correspondents in every part of the world, to cover the cable and radio costs to a staggering daily amount involved in the transmission of their messages, and to finance the development of world-wide teleprinter and radio transmission services for the distribution of the news when received—that it is difficult to see how any major new world agency could now possibly break into the field or survive even if it did.

The solution to the present Anglo-American domination in world news—if a solution is needed—must lie elsewhere. It would seem to lie most fruitfully in the development of stronger national news agencies in countries outside the American and Commonwealth groups to serve the domestic news needs of their press system and the ultimate association of such national agencies with the ownership of the world agencies on a cooperative basis.

The recent development of Reuters as a Commonwealth-owned cooperative agency perhaps points the way to the next step in world news reporting. If it were possible to associate other cooperatively owned national news agencies with one or other of the world agencies in the same way, and thus to develop truly international news organizations jointly owned by the newspapers of many countries, much of the anxiety that now exists about the too great Anglo-American voice in the selection of the news the rest of the world shall read could be removed. Whether justified or not, such anxiety is natural enough in a world of developing nationalist aspirations.

Meanwhile there can be no real complaint about the amount of news available to the peoples of the world if they are in a position —as many millions of them are not—to print and distribute it when it is received and read it when it is printed. Reuters alone sends out to all parts of the globe well over 6,000,000 words a month and the output of the other major agencies is of the same order.

What of the quality of the news thus so widely distributed? And what use is, in fact, made of it by the newspapers which receive it?

Deliberate bias in the news reports collected and distributed by the world news agencies is rare although, since even agency reporters are human, it does sometimes occur. But the speed of modern communication, with all the advantage it brings of almost simultaneous knowledge in almost every part of the world of important developments anywhere, has its disadvantages.

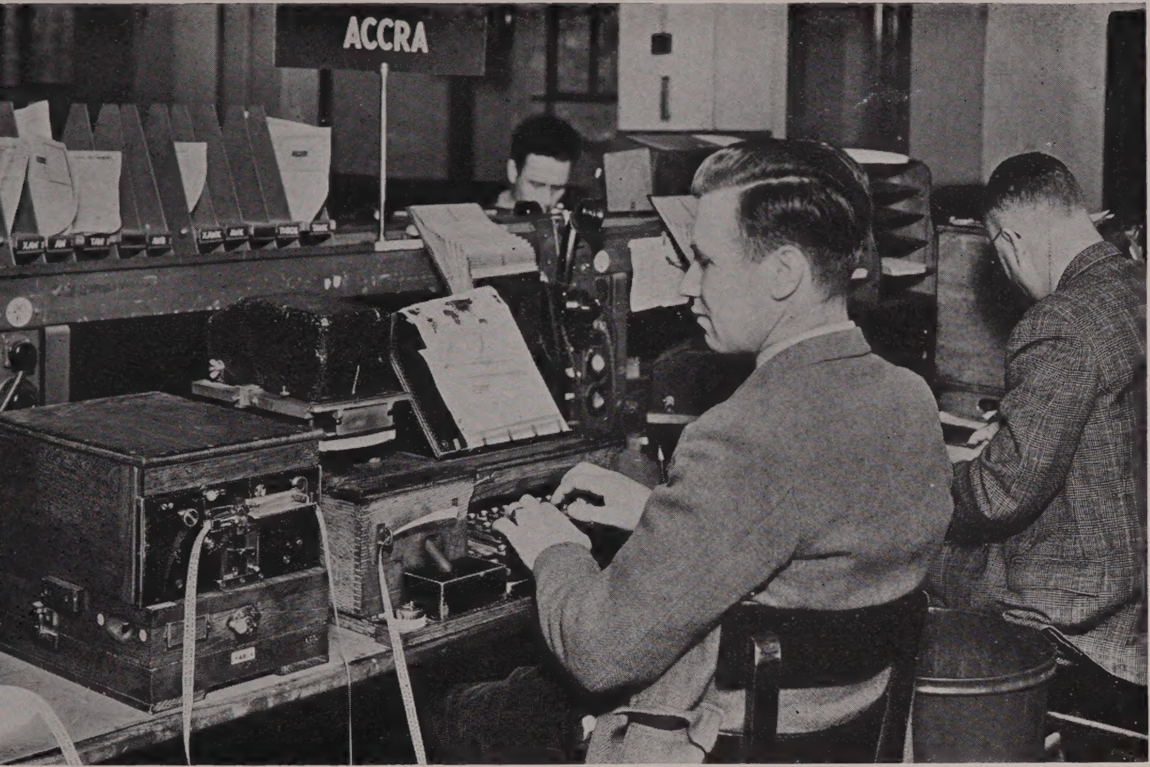
To the news agency reporter even more than to the newspaper correspondent every minute, every second even, is important. The newspaper correspondent must always think of his deadline—the very latest time he can file his story in order to make sure of it reaching his newspaper in time to be carried in the next day's paper. But for the agency reporter serving newspapers in every part of the globe, with his eye not simply on the clock in his home town but on those in every principal city in the world, and conscious always of the time-difference between continents, almost every hour of the day and a large part of the night provides its own deadline.

Moreover he functions in a highly competitive world in which even a few minutes may represent the difference between success and failure in enabling his organization to be 'first with the news' in the offices of newspaper clients which may well take the services of all his chief rivals as well as his own.

As a consequence the agencies are under a constant temptation to get the news in first, even at the cost of having insufficient time to make sure that all the details are accurate or the necessary leisure to put them into proper perspective.

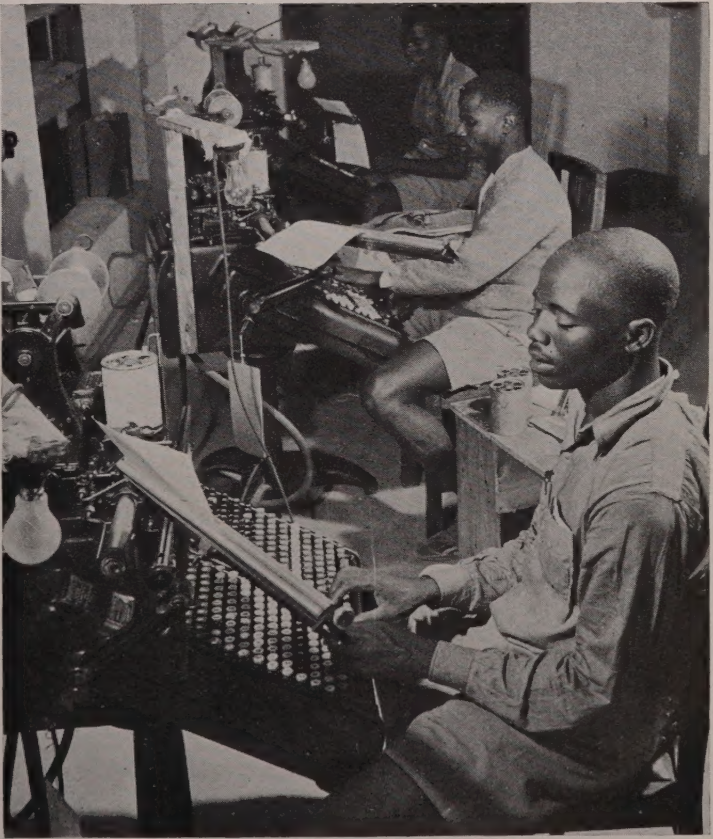
Anyone who has seen the mad rush of the agency correspondents to the telephone at the end of a Presidential Press conference—a rush in which one needs to be sprightly of limb to avoid being knocked down—will not marvel that sometimes Presidential views on important matters first break upon the world in an unfortunately sensational and partial form, but rather that they do not do so more often. The same is true of a great deal of other news; although it must be said that the major agencies are increasingly aware of the danger and recognize that in the long run their reputations rest at least as much on accuracy as speed.

One other factor over which the agencies themselves have no control tends similarly to affect both the completeness of their reporting of important foreign news and also the balance they are able to maintain between



By courtesy of H.M. Postmaster-General

business of collecting and distrib-
g news on an international scale is
costly and in many parts of the
ld newspapers have too small a read-
ip to be able to afford the cable
ges for a full news service. Be-
n all countries of the British
nmonwealth, however, press cables are
at the flat rate of a penny per
d; and this permits, for example,
West African newspaper publisher to
his readers well informed and use
most modern equipment in doing so.
ove) *A press telegram being sent*
n Electra House, the London office
Cable and Wireless, to Accra on the
d Coast; there to form a link in
chain of information binding the
rter at the scene of world events
right) *the West African newspaper*
positor operating a Monotype machine



Crown Copyright, Central Office of Information

courtesy of United States Information Service

All reporters want to be 'first with the news'; news agencies demand equal facilities for getting it. (Above) *Over 500 accredited American and foreign reporters may attend the weekly press-conferences held in Washington by the President. After an important statement there is a stampede to the telephones.* (Below) *The agencies' telephones in the temporary Press Room for the coronation of Queen Elizabeth*

courtesy of H.M. Postmaster-General

FOR OVERSEAS CALLS APPLY TO
THE ATTENDANT
POUR TOUT APPEL A L ETRANGER
ADRESSEZ VOUS AU GERANT DES
CABINES PUBLIQUES

Associated Pre

Competition ensures that the agencies' services are topical, comprehensive and rapidly distributed. (Above) *Each day at the world service desk of the London headquarters of Associated Press a complete news report is composed and sent out to the Commonwealth, Europe and the East. In the same building* (below) *photographs from reporters' cameras are developed with great speed for outward transmission*

Associated Pre

news from one part of the world and another. This is the wide difference in the rates charged for press cables according to where they are filed. Charges made by different countries for similar communication services vary enormously.

As a result, news messages from one area may have to be pruned to the bone or restricted to only the most sensational news, whereas from another area it may be possible to send well-informed background news at no greater cost. And where charges are so high as to allow only the barest minimum of the most exciting and dramatic news to be sent to an agency by its correspondent, with none of the detail and background that would make such news comprehensible, then news may become the enemy rather than the ally of international understanding.

Such differences in press rates make a distortion in the balance of world reporting almost inevitable. From this the Middle East, parts of the Far East and most of South America suffer particularly for in all these areas press rates are high—often fantastically so. It costs for example, to cite two areas very much in the news of which the ordinary reader knew little until events had become critical, 1s. 6½d. a word to send news direct to London from Korea and more than a shilling a word to send it from Persia. In such circumstances it is not economically possible within the budget limitations of even the largest news agency to provide a constant service of informed reporting capable of fully preparing readers for a crisis when it comes.

Only within the Commonwealth, where a penny press rate operates between all countries, is the high cost of cable charges no longer a serious factor in world reporting.

This whole question of international press rates is now being taken up by UNESCO which recently invited me to make a survey of the situation on its behalf (published under the title "Transmitting World News"). It is now making representations through the International Telecommunications Union in the hope of securing both a reduction in the highest rates and greater uniformity all round.

What of the newspapers themselves? Almost everywhere outside the American continent they are faced with a shortage of newsprint which makes adequate international reporting virtually impossible. They are forced each day to carry out a process of news selection which may well compel them to throw away as much of the news they receive from the world agencies and their own correspondents as they are able to print, or even more. In the process the balance of world reporting is bound to suffer.

It must be added that their own prejudices—and those of their readers—frequently add to the consequent distortion of world affairs. The reader of the modern large-circulation newspaper is unlikely to go without news of any really dramatic or sensational event anywhere in the world. But his picture of the outside world may well be totally out of perspective because he is told little or nothing of what his international neighbours do when they are not in the throes of a political crisis, of murdering or divorcing each other in sensational circumstances, or in the grip of a disaster of Nature.

Moreover, countries tend to develop a picture of the habits of people of other nations to which their newspapers consciously or unconsciously pander. A recent survey conducted by the International Press Institute showed, for example, that in American eyes Italy is so much a picture of romantic individualists that it would be almost impossible to gather from the American press that it had any political life at all—almost the only news reported was 'human interest' news about odd people doing odd and preferably romantic things. And European news coverage of India was shown to give a quite undue emphasis to elephants and snakes.

I can well remember the editor of a small American paper in the Middle West dropping a story about British scientific development into the wastepaper basket with the words: "No-one will want to read that. In this town all Englishmen wear top-hats and ride in toy railways."

Deep-seated preconceptions about what the people of one country will find interesting or credible about those of another, unequal cable costs and fantastically high ones in some parts of the world, shortages of newsprint—all these stand in the way of a balanced reporting of world news, although the facilities for such reporting now exist to a greater extent than ever before. And over and above these the absence of newspapers in large areas of the world and the persistence of mass illiteracy in many parts of Asia, Africa and South America still provide formidable barriers to the spread of international information.

The power of the press as a medium of mass communication and education is of the greatest importance. But it is by no means yet always exercised with invariable good sense and balance; and it is still very far indeed from being world-wide.